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THE

CITY OF WALTHAM,

MASSACHUSETTS.

ITS ADVANTAGES TO MANUFACTURERS AND AS A PLACE OF RESIDENCE.

OTHER MUNICIPAL ATTRACTIONS, WITH SKETCHES OF THE PRESENT INDUSTRIES.

BY

EPHRAIM L. BARRY.

ILLUSTRATED.

CATHOLIC UNIVERSITY OF AMERICA
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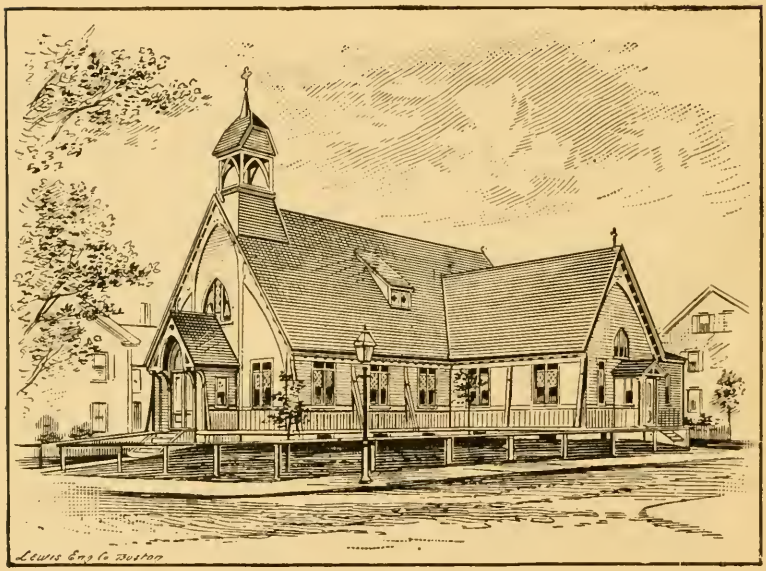
Part I.—Historical.

Among a large portion of the older residents of the City of Waltham it is a matter of deep regret that an elaborate and comprehensive account of the history of the town and city is still unpublished. True, we have in Nelson's "Waltham, Past and Present," published by Moses King in 1882, and in Drake's "History of Middlesex County," in the article on Waltham by Alexander Starbuck, (1880.) very interesting and carefully prepared sketches; but the field of general history is comparatively untrodden, and therein the historian will find much to reward his labors. Possibly at some future time this work may be carried out to the satisfaction of all, as it is devoutly hoped it will be, especially as the scope of this little volume is not so much to unfold the secrets of the past, as to place before the world something about Waltham, its industries and manifold attractions to manufacturers and residents, as they exist to-day. Therefore, many items of historic interest must be omitted from the present sketch, the aim being merely to present succinctly a few of the leading events in the progress of the town and city.

The territory in and about Waltham seems to have early attracted attention on account of its productiveness and the readiness with which it could be converted into productive farms for the support of the first settlers; and it is largely on this account that Charlestown and Watertown, our neighbors on the east, were selected as their future dwelling places by Gov. Winthrop, Henry Bright, Sir Richard Saltonstall and others of the "Governor and Company of the Massachusetts Bay in

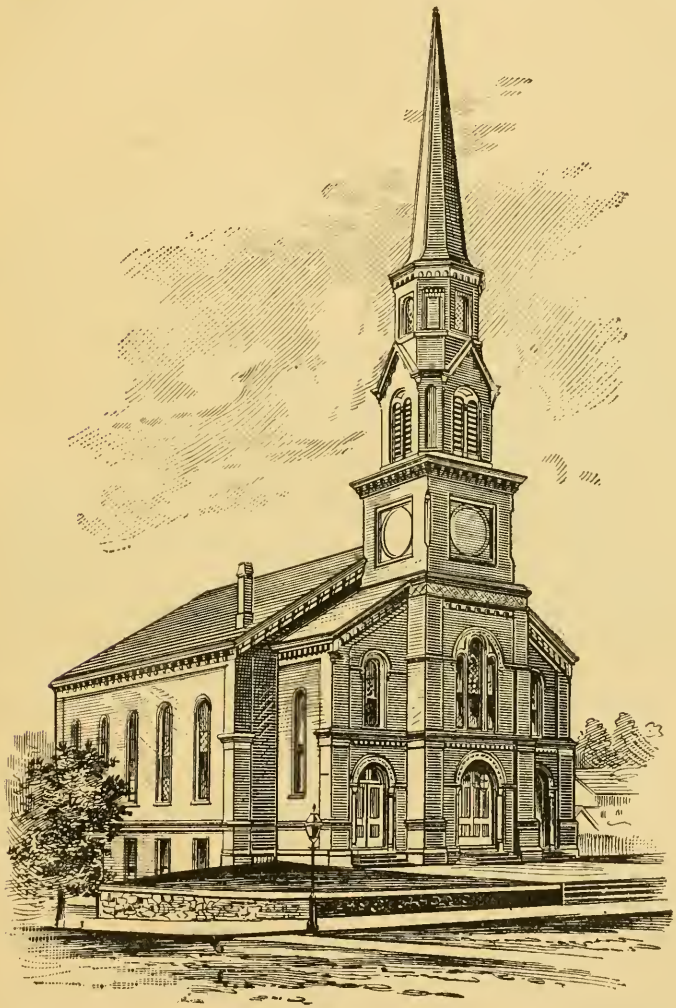
New England," (they having previously investigated the territory where the City of Salem is now situated,) which corporation obtained a charter from the English crown in about 1628-9, and for nearly a century following, the latter town covered a large territory, embracing the present towns of Belmont and Weston, the city of Waltham and portions of Lincoln and Concord. Naturally, the population of the entire territory at that early date did not equal the number of inhabitants now contained in the smallest of the towns just mentioned; but as years



ASCENSION CHURCH, MOODY STREET.

passed away the people increased in number, and, owing to the frequent troubles with the Indians, it became necessary for them to dwell in groups, in order to better protect themselves from their aggressive neighbors. Thus, near the close of the seventeenth century, Watertown became divided into three precincts: the East, or substantially what is now known as Watertown and Belmont; the Middle, or Waltham, and the West, known since 1812-3, when that town was incor-

porated, as Weston, and the territory still further west. These divisions for mutual protection have been justly termed the "entering wedge" for the further division into several corporate towns of the



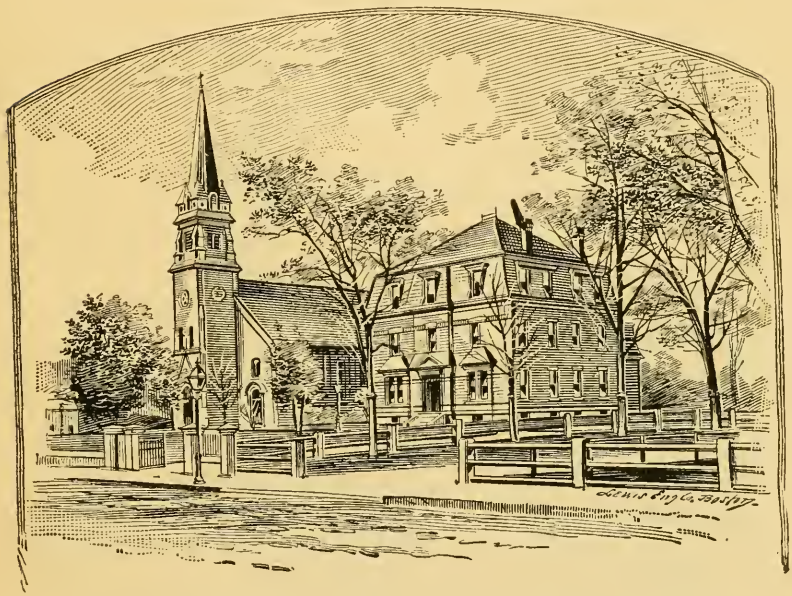
FIRST BAPTIST CHURCH, MOODY STREET.

territory, the limits of which, in comparison with the more permanent boundary monuments of to-day, were rather vague.

Later, ecclesiastical differences exerted their influence, for, there being but one church in the town, and that located in the extreme easterly portion, it was but natural that the farmers of the West and Middle Precincts should desire some more convenient place of worship, especially as it was their duty under the laws of the colony to attend Divine service every Sabbath. The feeling of dissatisfaction became intense, when, after much discussion and dispute, it was decided to build a second church further to the westward and near what is now the business centre of Watertown, still another new church having been built a few years earlier (about 1697) for the people of the West Precinct. But even these steps did not satisfy the people, and therefore there was continued agitation, until in 1715 the town voted to erect another church for the West Precinct, (Waltham, Weston having previously been incorporated,) and at about the same time the eastern, or old, congregation petitioned the General Court for separation and incorporation as an independent town. It was not until 1720, however, that the question was settled; in that year the inhabitants petitioned the General Court to establish the boundary lines between the two precincts, and the Court in granting the petition and establishing the bounds, also decreed that the west, or new, meeting house should be removed into what is now Waltham or a new one be built there; and the town subsequently voted in compliance with this action.

The establishment of this church naturally settled the differences of an ecclesiastical nature which had for so long existed, but Providence had evidently ordered other than a peaceful union of the two sections, for in a few years still further dissentions arose over the attempt of the the West Precinct to establish a school of its own, and in 1729 this culminated in a refusal by the town to accept a site and money that had been offered by the citizens as a gift towards opening such a school. A year later the grievances of the two precincts were again carried before the General Court, this time the incorporation of a new town being asked, the difficulty of satisfactorily adjusting the dispute over educational matters being the especial reason given in the prayer

of the petitioners. In succeeding years still further attempts of a like nature were made and principally for like reasons, so that in 1737 a final and successful attempt was made, a petition being presented to the General Court on December 14 of that year, which was granted, and on the last day of the month the act incorporating the new town of Waltham was passed to be engrossed, it receiving the signature of "His excellency the Governor, John J. Belcher," January 4,



ST. MARY'S CHURCH AND PAROCHIAL RESIDENCE, SCHOOL STREET.

1737-8, "and in the record the name Waltham of the new town is printed for the first time on this date."

Thus were the differences between these people placed at rest, and Waltham was born as the 145th town in the commonwealth.

The reasons which prompted the selection of the name "Waltham," for the new town are not difinitely known, but authorities appear to agree that it was so designated after "Waltham Abbey," also

known as "Waltham Holy Cross," in England, the mother country, from whence it is supposed that a number of the early inhabitants may have come. The area of the new town was about 8,891 acres, the population being a little less than 550.

On January 18, 1737-8, the first town meeting was held for the choice of officers to serve until the annual or "anniversary" meeting in March. Deacon Thomas Livermore served as moderator of that meeting, and the following officers were elected:

Selectmen—Deacon William Brown, Deacon Thomas Livermore, Mr. Daniel Benjamin, Mr. Joseph Pierce, Lieutenant Thomas Bigelow.

Town Clerk and Treasurer—Samuel Livermore.

Constable—Mr. Joseph Hastings.

Assessors—George Livermore, John Cutting, John Chadwick.

Sealer of Leather—Mr. Joseph Stratton.

Fence Viewers—John Ball, Jr., Joseph Hagar.

Surveyors of Highways—John Ball ye 3d, John Viels.

Tytheing Men—Isaac Pierce, Theophilus Mansfield.

Hog Reeves—Joseph Harrington, Elnathan Whitney.

At the subsequent annual meeting, Thomas Hammond, John Smith, John Bemis, Ensign Thomas Harrington and Deacon Jonathan Sanderson were chosen as selectmen for the ensuing year; and on May 9, Daniel Benjamin was chosen as the first representative, but he declined the honor, and Lieutenant Thomas Bigelow was chosen in his place, and since that first election Waltham has sent many representative men to the General Court, some of whom won national reknown and are accorded an honorable place in the history of the nation.

One of the early acts of the new town was to secure the services of a competent schoolmaster, to Mr. Timothy Harrington falling the honor of being Waltham's first school teacher, at a salary of £20, old tenure, per quarter. Likewise an early record is found of generous appropriation for the care and maintenance of the highways, and it is still a matter of pride to the present citizens of Waltham that during the years intervening since the incorporation of the town, both these

departments of the public service have been generously attended to and great care manifested in their development.

During the early portion of its existence the pathway of the town was much the same as that of many other Massachusetts communities. For a term of some seventy-five years after its incorporation the residents were almost entirely engaged in agricultural pursuits, performing

CONGREGATIONAL CHURCH, MAIN STREET.

faithfully and well their duty to their families and the community. During the war between England and France, the Revolutionary war and the war of 1812, the town bore an honorable part and furnished a a comparatively large number of men, the early records giving abundant testimony to this effect, in the way of appropriations for the services of the men and equipments furnished, while additional evidence to the same end is found in the very frequent occurence of military titles, which at that early day were likely to be the result of actual service rather than to be derived from the modern custom of adhering to a title borne by the commander of a civic or torchlight procession.

Being no exception to the general rule applying to New England agricultural communities, Waltham increased rather slowly in population and wealth, the losses attendant upon the several wars serving as a partial check even upon the natural increase. The records show that in 1764 there were 94 houses and 107 families, the total population 663, and the number of stores, 14. No very decided increase was made until after the commencement of operations by the Boston Manufacturing Company in 1812, which gave a decided impetus to the town; while in more recent years the establishment of the American Waltham Watch Company's works in 1853-8, and their subsequent wonderful development, have very materially increased both the population and wealth, so that from a population of about 1000 in 1810, and 6,896 in 1865, Waltham is a city today, containing, according to the state census compiled in 1885, 14,609 souls, or fully 15,500 at the commencement of 1887. A more comprehensive account of these two great corporations, in connection with the growth of the city, will be found in another part of this volume, the attention of the reader being especially directed to the unusual degree of interest which they have manifested in the welfare of the people about them and in their employ.

Since the introduction of manufacturing industries, some seventy-five years ago, the characterestics of the inhabitants and their pursuits have, therefore, undergone a very decided change. A large portion of the territory is still successfully devoted to agriculture, and there is a number of excellent farms, upon which a large amount of produce of

the various kinds is raised for the local and Boston markets; but, without in any degree belittleing this still important branch of the city's production, the mechanical pursuits by far predominate, and yet there are missed many of the features of population, etc., usually existing in manufacturing communities, Waltham possessing in this respect an in-

METHODIST CHURCH, CORNER OF MAIN AND MOODY STREETS.

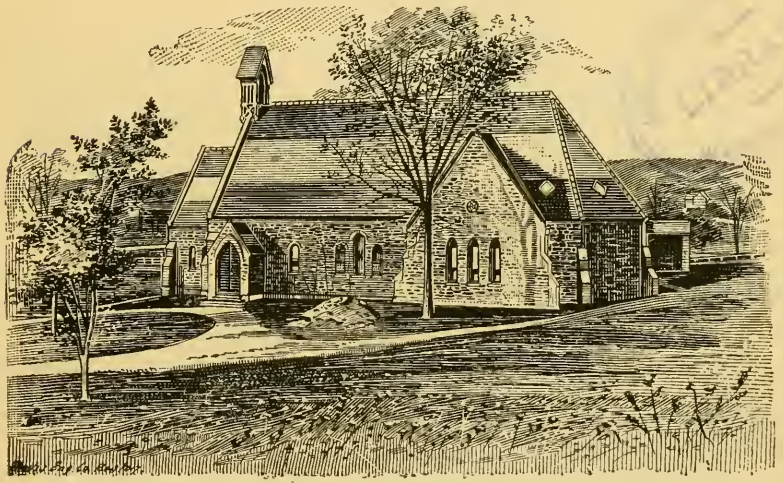
dividuality of its own, which places it on a different plane from the average city of its class.

Having noted the principal causes which led to the incorporation of Waltham, and reserving for latter pages an outline of the earlier industries, let us pass over the years of agricultural quietude,—which may be presumed to have been passed, aside from the excitement incident to the several wars, in Arcadian simplicity and a rather severe struggle for existence,—to the commencement of the second quarter of

CHRIST (EPISCOPAL) CHURCH, CENTRAL STREET.

the present century, when the mechanical pursuits had become fairly introduced, and the character of the town was undergoing a change. A few years previous to this time, the Boston Manufacturing Company had extended its operations to the site of the present Bleachery and Dye Works, and in 1820 the "Newton Chymical Company," as its charter reads, commenced operations on lands since annexed to Waltham, whose works grew to be the largest of the kind in the country, sulphuric acid being the principal product, and thus Waltham was rapidly becoming a business centre.

At this time an interesting event occurred, for on Dec. 24, 1826, some three score or more gentlemen met and organized the Rumford Institute, for the purpose of "mutual instruction in the arts and sciences," the name being selected in honor of Count Rumford, whose scientific researches were then attracting such wide spread attention, the institute being, probably, the first society of its kind in the country. Since its organization, and subsequent incorporation in March, 1858, it has furnished the leading course of lectures and entertainments, which in its earlier years were generally of a scientific or



NEW (SWEDENBORGIAN) CHURCH, LEXINGTON STREET.

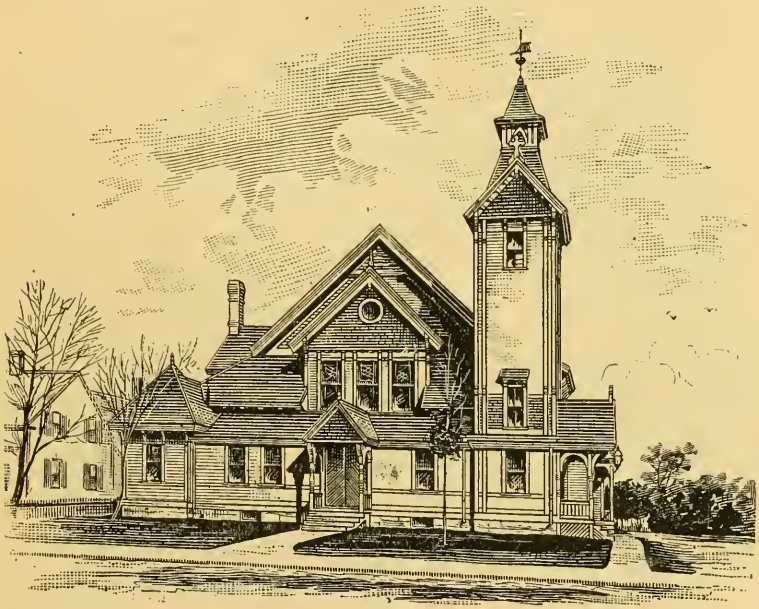
practical character. During its second year the Boston Manufacturing Company erected for the institute the Rumford Building, for so long used as a Town Hall, and now doing duty as an embryo City Hall, in which rooms were fitted up for the use of the society. A few years later, the same company presented the nucleus of a library, and for years the Rumford Institute Circulating Library was a feature of the town. Many eminent men have lectured before the institute, and it is mentioned by several writers of note as a remarkable institution and

worthy of emulation. For many years the library of the institute was kept in apartments at the west end of Rumford building, but in 1865 the institute made a generous offer to give its books to the town, which was accepted, and thus was formed the foundation of the Waltham Public Library. (Included in the library of the Rumford Institue was the Waltham Social Library, established in 1798.)

UNITARIAN CHURCH, CORNER OF CHURCH AND SCHOOL STREETS.

Another prominent feature of Waltham's history was the formation, in 1857, of the Waltham Agricultural Library Association, for the purpose of discussing agricultural topics and forming a library, which has become one of the best known institutions of the town. In later years the name of this society was changed to the Waltham Farmers' Club, by which title it is known at the present time. During the first

year of its existence a remarkably successful agricultural and mechanical exhibition was held, and others equally successful have since taken place, although of late years the doings of the club have been confined to a series of meetings each winter at the residences of members, at which agricultural and other topics of more general interest have been discussed, the club having been the instigator of a number of import-



UNIVERSALIST CHURCH, MAIN STREET.

ant public improvements. It is belived that this club is the orignator of the many Farmers' Clubs which have sprung up in various parts of the country.

In 1873 the town accepted the offer of the club to add its books to the public library, which thus received another valuable acquisition. At the opening of the public library in 1865, rooms were secured in the second story of the Waltham National Bank Building, where it remained until January, 1880, when it was removed to the pleasant apart-

ments in Welch's Block, at the corner of Moody and Charles streets. The town, and its successor, the city, has made generous appropriations for the support of the library, so that it now contains more than 12,000 volumes, many of which have been selected with a view to the wishes of the citizens, and their instruction in the pursuits in which they are engaged, especial pains having been taken in the latter regard.

There are many yearnings for a separate, more appropriate and elaborate library building, and it is generally conceded that when the lease of the present quarters expires in 1890, the city will build for itself, provided that in the meantime some public spirited citizen does not relieve the people of this duty by presenting a building to be devoted to library purposes.

In 1849, the inhabitants were agitated by an attempt to have that portion of the town lying south of Charles River annexed to Newton, but the project failed, on the contrary, some 500 acres of Newton territory becoming a part of Waltham, comprising what is now the "South Side," one of the pleasantest parts of the city. There have since been rumors of "secession" by this portion of the city, but it is universally conceded that all probabilities of such a kind were placed at rest by the adoption of a city charter.

Even during later years, from 1825 to 1860, the growth of Waltham, like that of many other portions of the United States, continued to be slow, compared with the far more rapid growth, principally from immigration, in recent years. The manufacturing companies had not the extensive markets of to-day, hence for some time their effect on the population was slight; but their progress was healthy, other and smaller industries were introduced, so that now, while the Boston Manufacturing Company and the American Waltham Watch Company, with a combined force of nearly 5,000 employes, are by far the largest, there are numerous other industries, furnishing employment for many more, the introduction and growth of the latter establishments being most rapid since the close of the civil war. There are few events in the history of the town during this period which are prominent above the ordinary and perhaps trivial incidents of every day life, which contribute so much to the history of a people or a town. Thus the people of

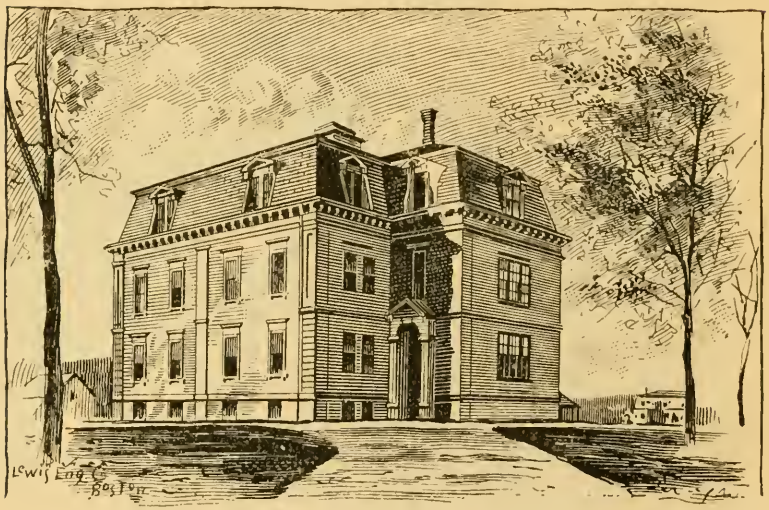
Waltham floated along with the popular current, until the opening of the civil war, which very naturally proved a source of excitement and and stimulation.

The record of the town of Waltham during the war of the Rebellion is an enviable one and reflects great credit upon the patriotism and devotion of her citizens. Over 700 of her sons performed valiant ser-

HIGH SCHOOL BUILDING, CHURCH STREET.

vice on the battlefields, serving in fourteen regiments, in addition to duty in the navy, the cavalry and the artillery, the tablets of the granite shaft on the common commemorating the valor of the many who gave up their lives in that long struggle for national unity. In addition to

furnishing so many active participants in the war, in comparison with the population, the women of Waltham also showed a degree of patriotism equal to that of their brothers, and much good was accomplished by their sacrificing service, at home and upon the battlefield, through the Soldiers' Aid Society and the Sanitary Commission. The services rendered by these devoted men and women is held in the highest estimation, and it would indeed be fitting that a lasting record and memorial of their deeds and work should be made. Many Waltham soldiers

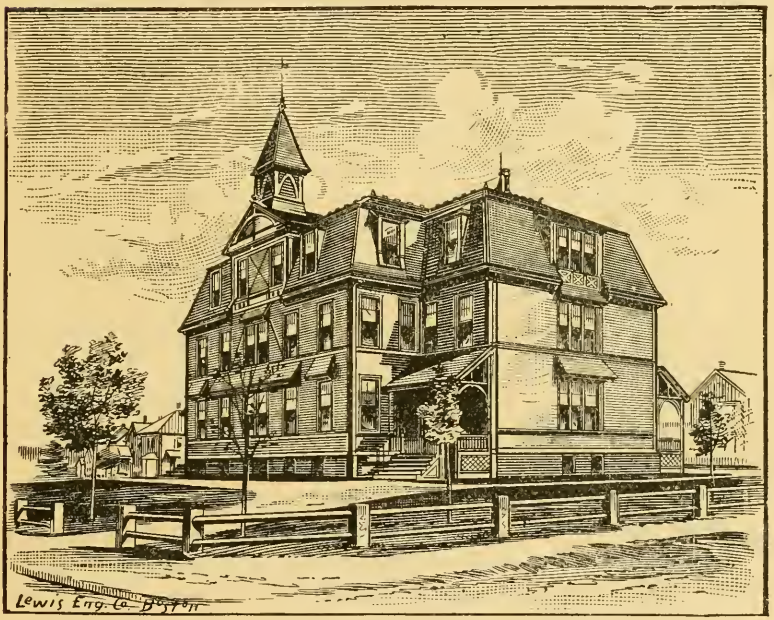


NORTH GRAMMAR SCHOOL BUILDING, SCHOOL STREET.

were rewarded for their gallantry by well-earned promotions in the commands in which they served, Major-General N. P. Banks, than whom no one is held in higher esteem by the citizens of Waltham today, holding the highest rank in the army, while the late Commodore C. H. B. Caldwell held a similar position in relation to the navy.

During the years immediately following the close of the war, Waltham made vigorous strides in growth, and the impetus which her industries had received was then very clearly manifest. New fields for

commerce had been opened, new industries had been and were being introduced, with the effect of stimulating a very active growth in the population and wealth. Even the financial crises or "panics" of the last two decades were felt with less severity than in almost any other town in the country, and in all respects the growth of the municipality has been continual, lasting and in the right direction.



SOUTH GRAMMAR SCHOOL BUILDING, HIGH STREET.

The population increased to such an extent that in 1872 the necessity for a better water supply was imperatively felt, and therefore a system of public water works was introduced, the town having the remarkably good fortune to secure a pure and abundant supply at the site chosen for the pumping station on the banks of Charles River, at a point a few rods west of Mt. Feake Cemetery, while for the reservoir an equally good choice of site was made on an adjacent hill, from whence

the water could be supplied by gravity to all parts of the town likely to use it for many years.

The town continued in this happy state of peaceful activity until 1882, when the first mutterings of an approaching disturbance of public opinion were felt, in the shape of suggestions that the form of government should be changed to the more dignified one of a city. The principal arguments advanced in behalf of the necessity for such a step were that, while it could not be justly claimed that town affairs had been mismanaged, matters of public improvement were permitted to languish; the conduct of affairs was vested in the hands of too small a number of persons, and, perhaps as important a reason as any, the town meetings (in which nearly all New England people still have faith as the model and truly democratic method of transacting public business) had become cumbersome, unwieldy and possibly a trifle unruly. This movement met with the same fate that has attended similar agitations in other communities: it was born, languished, but was ultimately successful; for although the more conservative citizens were suspicious of the evils that might accompany the change, many such doubters were won over by the novel form of charter proposed, (of which further mention is made,) and hence on June 2, 1884, Gov. Robinson affixed his signature to the act which incorporated Waltham as the twenty-second city in the commonwealth. The first election under the charter was held December 2, 1884, when Hon. B. B. Johnson was elected Mayor, Mr. H. N. Fisher subsequently being chosen president of the Board of Aldermen; Mr. L. N. Hall, City Clerk; Mr. J. C. Thorp, City Treasurer, and Mr. E. A. Harrington, City Auditor.

Thus far there can certainly be no serious regrets that Waltham has introduced a mayor and aldermen to take charge of affairs. There has been no extravagance; taxation has not increased, a greatly feared event, and progress has been continual and steady. There is also ample justification for the belief that this progress will be further continued; the city has almost every advantage of modern civilivation; her people are of an excellent, intelligent class; her financial standing is of the best, and her citizens take such pride in their surroundings that Waltham seems destined to have a very bright future.

The Waltham Bank, organized in 1835, afterwards became the Waltham National Bank. It has a capital of $150,000, is in a flourishing condition and is the only national bank in the city. The Waltham Savings Bank is also the only similar institution and has deposits aggregating nearly $1,500,000. The Waltham Co-operative Saving Fund and Loan Association, now known as the Waltham Co-operative Bank, was organized in September, 1880, and is one of the oldest similar corporations in the state. It has assisted many of the working people to build homes of their own, and is held in such esteem that the demand for its shares is greater than the supply.

Waltham's first newspaper was *The Hive*, published by Mr. S. B. Emmons, about 1830-35. Next came the *Waltham Sentinel*, founded by Mr. Josiah Hastings in 1856, and continued by him until his death in 1876, when it was purchased by Mr. George Phinney and consolidated with the *Waltham Free Press*, first published by the latter in 1863, and still continued by Messrs. Somers & Starbuck. In 1876 the *Waltham Record* was published by Mr. E. L. Barry and was continued by him until 1885, when it became the property of Pratt Bros., of Marlboro, by whom it is now conducted. The publication of the *Waltham Daily Tribune* was commenced by Messrs. Eaton & Reed, in 1882, and it is now published by T. B. Eaton, Esq. The *Waltham Daily Times* is the youngest newspaper in the city, and was founded by Messrs. Rice & Drake in 1886. These papers, with the exception of the Tribune, are advocates of the Republican party, and all unite in giving a faithful epitome of the local news.

The Waltham Board of Trade was organized in 1885. Its membership embraces a large number of the merchants and manufacturers, and its objects are to look carefully after the general interests and welfare of the city, suggest and so far as possible carry out improvements, induce the location of new industries, and other work of a similar kind. Its accomplishments thus far have included no very large undertaking, but among its membership are many active minds, its influence is in the right direction, and it is probable that greater accomplishments are before the board. It should be stated, however, that the Board was instrumental in securing the introduction of the electric light upon the

streets and in the stores, while it also exerted its influence in bringing about the purchase of the land adjoining the common as a location for a future city hall.

Grove Hill is the oldest cemetery, and for many years its proper name was lost in the familiar appellation, the "old burying ground." This cemetery was established in 1703 for the use of Rev. Samuel Angier's society, and it is located on lower Main street, extending southward to Grove street. Mount Feake Cemetery, established in 1858, was so called from the fact that that name was given to its principal prominence by Governor Winthrop during his earliest explorations of Charles River. This cemetery is situated in the south-westerly part of the city and has an extensive frontage on the river. The location is one of great natural beauty, and much attention has been given to properly caring for the grounds, until they are in excellent condition. The cemetery first used by St. Mary's Society is the present Church-street Cemetery. Its use is nearly discontinued, a large tract of land having been purchased several years ago on the South Side in the south-easterly part of the city for such purposes. This cemetery has also been greatly improved: it is well laid out, and is known as Calvary Cemetery.

The city is provided with four hotels, the Prospect House, the Central House, the Sanderson House, on the North Side, and the South Side Hotel. There are besides numerous restaurants and boarding-houses, exclusive of those controlled by the larger corporations. All of these are very well equipped. The attractiveness of the local scenery and of the neighborhood is such that frequently a number of "summer boarders" seek the hospitality of the hotels.

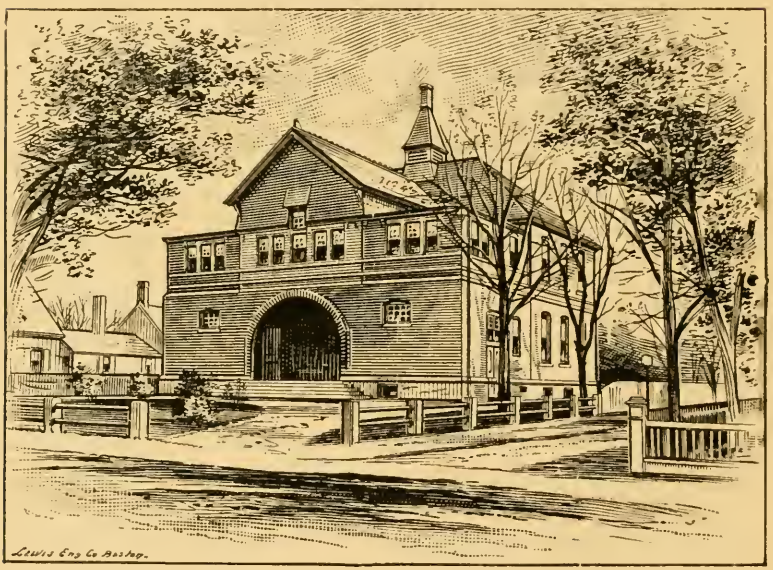
AN OUTLINE OF CHURCH HISTORY.

The church which the earliest residents of what is now Waltham attended was formed soon after the settlement of Watertown by Gov. Winthrop and his people. It was situated a little to the east of Mt. Auburn Cemetery and is thought to have been the "second church of Massachusetts Bay." It remained the only church in the district until about 1696, when a second church was built nearer the center of Watertown, the first church in Waltham being erected in 1720, in compliance, as already noted, with an order of the General Court, an old church in Newton being purchased for £80 and removed to a site about two rods east of the present entrance to the estate of A. T. Lyman, Esq. Rev. Warham Williams was ordained pastor of this church in 1723, a position which he held until his death in 1751, when he was succeeded by Rev. Jacob Cushing, of Shrewsbury.

This church was used until 1767, when it was abandoned and a new one erected on the triangular lot to the west of the entrance to the Lyman estate.

The Rev. Mr. Cushing died in 1809, and was succeeded by Rev. Samuel Ripley in the same year. Until six years after his settlement there was no church bell in town, and the church was not heated in cold weather until 1822. During the war of 1812, some of the society, who did not like Mr. Ripley's anti-war sermons, seceded and engaged Rev. Elisha Williams to preach for them in a school building then situated east of the old burying ground, (Grove Hill Cemetery) and afterwards in the hall of the Kimball tavern. In the following year a reconcilation was effected and the societies were reunited, and in January, 1815, the membership of the church was reported at 160. In 1820 trouble again arose in the society and the Second Religious Society was formed, and it held its services in the building on Elm street next south of Music Hall, formerly used as a school house, and the communion was administered by Rev. Jonanthan Homer of Newton. It was decided to build another church and Rev. Sewall Harding was called to the pastorate, in pursuance to the wish of the majority of the

signers to the agreement to build, he having preached to the society in the school house. In 1821 he was ordained and at the same time a new edifice on Church street, on the lot now occupied by the Catholic cemetery, was dedicated. In 1825 Mr. Harding was dismissed by a vote of the society, but the majority of the members remained true to him and for a time held services in Deacon Pearson's house on Main street, and afterwards in a hall at the corner of Main and Newton streets, where they remained until a church was erected at the corner of Main

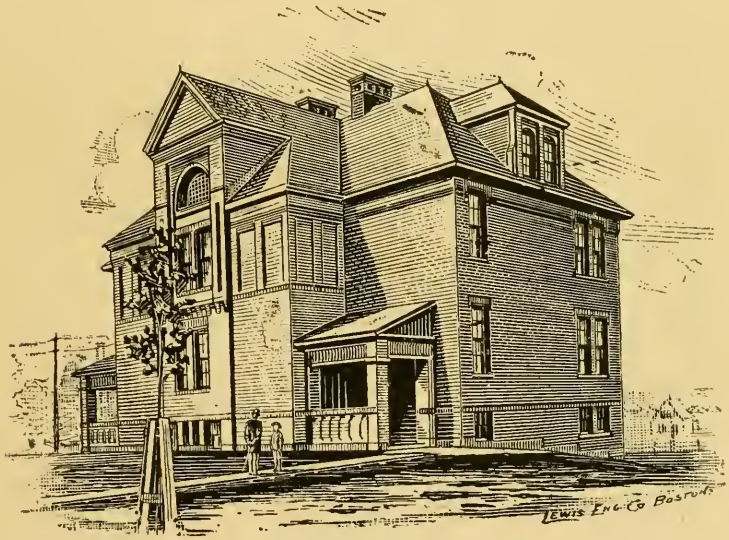


HEARD STREET SCHOOL BUILDING.

and Heard streets, which was dedicated in 1826. This society afterwards took the name of the Trinitairan Congregational Society, and, after its church had been twice enlarged and outgrown, its present fine edifice was erected in 1870-71, the farewell sermon in the old church being delivered by Rev. Mr. Harding on August 14, 1870. This clergyman remained with the society until 1837, and was succeeded by Rev. John Whiting in 1858. During the pastorate of the latter the

society became divided, but was afterwards reunited. Rev. R. B. Thurston officiated as pastor from 1858 to 1864, and Rev. E. E. Strong from 1865 to 1878. After Mr. Strong resigned, the pulpit was supplied by several clergymen, until the settlement of the present pastor, Rev. B. M. Fullerton.

After the dismissal of Mr. Harding, the Second Religious Society secured the Rev. Bernard Whitman, Unitarian, as its pastor, and he officiated in the edifice on Church street until it was struck by lightning in 1829. The society then worshiped in Rumford Hall and in 1830



PROSPECT STREET SCHOOL BUILDING.

dedicated its new church on the common. Rev. Mr. Whitman died in 1834, and was succeeded by Rev. Warren Burton, who was released in April, 1837, the church being sold to the Methodists the same year. The Second Religious Society worshipped for a time in Rumford Hall, having no settled pastor, and no record is said to appear of its dissolution.

In 1839, the First Society accepted Mr. Ripley's resignation, and

in the following year the affairs of the society were closed up, the society having previously made ineffectual attempts to unite with the Second Society.

In 1839 the Independent Congregational Society was formed, Mr. Ripley became its pastor and he continued to preach, with other clergymen, until Rev. George Simmons was installed in 1841, Mr. Ripley becoming associate pastor. The church of this society is now known as the First Parish, to which its name was changed by act of the legislature in 1866, the church being thoroughly repaired and the chapel built in 1867. Rev. Dr. Thomas Hill became pastor of the society in 1843, which position he retained until 1860. Rev. James C. Parsons then officiated until 1864, he being succeeded in 1865 by Rev. S. B. Flagg, who remained until 1869. Rev. Clay McCauley became its pastor in that year, he resigning in 1872, to be followed the next year by Rev. E. C. Guild, who retired later, to be succeeded by the present pastor, Rev. Edward J. Young.

In November, 1848, the first services connected with the formation of the Protestant Episcopal, or Christ, church, were held in Rumford Hall. The parish was organized the following year, and the present church built on Central street, the chapel having been added to its rear a few years ago. Rev. Thomas F. Fales became its pastor November 1, 1849, a position which he has since held. He has become thoroughly identified with the church, and the town as well, and is endeared to all by his many good qualities and unaffected mode of life and his earnest devotion to the church and its work. It was mainly through his efforts that Ascension church, the first church to be erected on the South Side, was organized in 1882, he having labored assiduously for the attainment of that object, the citizens of the town having generously responded to his appeals for aid. Rev. H. S. Nash was pastor of Ascension church for about a year, when he was succeeded by Rev. C. P. Mills, the latter resigning toward the close of 1886, Rev. Mr. Harris, being his successor.

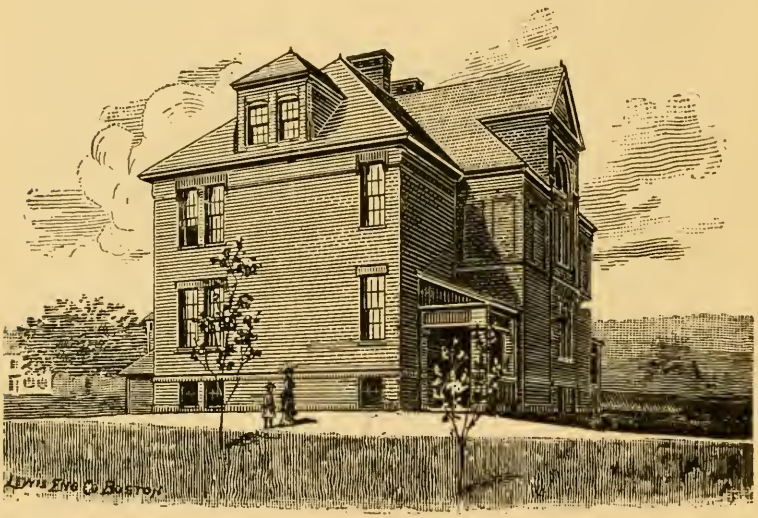
It is said in Nelson's history that the first Methodist preaching in Waltham of which a record is found, was at the house of Abraham Bemis in 1794, by Bishop Ashbury. Four years later a rough structure

was erected in Weston, and there are persons still residing in Waltham who can remember those who walked thither to attend the services of their chosen faith. Later, in 1834, the schoolhouse of Mr. Ropes on Church street, now the dwelling first north of the High school, was used by this denomination, and afterward they worshipped in Masonic Hall on Main street. In 1837 plans were about completed for the erection of a church on Church street, but they were dropped and the church of the Second Religious Society on the common was purchased and the Rev. George Pickering became its pastor. In 1858 the town purchased the land surrounding the church for a common and the church was removed to the present location at the corner of Moody and Main streets. The old church was destroyed by fire on May 27th, 1860. The church was immediately rebuilt, the corner stone being laid August 21, 1860. Rev. Mr. Pickering alternated as pastor with Rev. O. R. Howard of Watertown until 1839, and the succeeding pastors have been: Rev. E. A. Lyon from 1839 to 1840; Rev. Horace G. Barrus from 1840 to 1842; Rev. B. K. Pierce from 1842 to 1844; Rev. David Kilburn from 1844 to 1845; Rev. John Paulson from 1845 to 1846; Rev. Moses P. Webster from 1846 to 1848; Rev. Jacob Sanborn from 1848 to 1850; Rev. George W. Bates from 1850 to 1852; Rev. N. J. Merrill from 1852 to 1853; Rev. Luman Boyden from 1853 to 1855; Rev. Justin S. Bowers from 1855 to 1856; Rev. T. W. Lewis from 1856 to 1858; Rev. E. A. Manning from 1858 to 1861; Rev. Samuel Kelley from 1861 to 1863; Rev. D. K. Merrill from 1863 to 1865; Rev. Cryus L. Eastman from 1865 to 1868; Rev. D. E. Chapin from 1868 to 1870; Rev. L. J. Hall from 1870 to 1872; Rev. Jesse Wagner from 1872 to 1875; Rev. W. A. Braman from 1875 to 1876; Rev. W. W. Colburn, Rev. G. W. Mansfield, Rev. I. H. Packard, Rev. G. F. Eaton; Rev. J. M. Avann being the present pastor.

The First Baptist Church was organized November 4, 1852, with twenty-four members. The vestry of the present church was first used January 1, 1856, and the edifice was dedicated in February of the same year. Its first pastor was Rev. M. L. Bickford, who was followed by Revs. E. B. Eddy, A. M. Bacon, W. H. Shedd, W. C. Barrows, F. D. Bland, and the present pastor, Rev. J. V. Stratton. The society

has been very prosperous and it has now a large membership, with a large Sabbath school.

About thirty-five years ago, Rev. Luther Strain became pastor of the first Catholic church in Waltham, from which has grown the prosperous St. Mary's Parish, one of the very largest in this vicinity. After two years Rev. Patrick Flood succeeded to the pastorate, under whom the church was remodeled, enlarged and finely decorated. Rev. Timothy Brosnahan was appointed pastor in 1876, and under his guidance the parish has still further increased, a parochical residence been built and arrangements completed for the early opening of parochial schools.



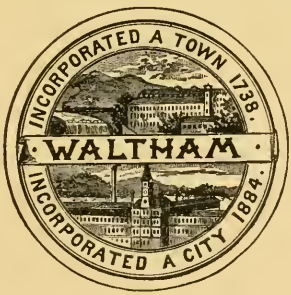
BACON STREET SCHOOL HOUSE.

Rev. J. J. Murphy was appointed assistant pastor in 1873. His successors have been Rev. J. S. McCone and Rev. Fr. Lally, Rev. T. J. Mahoney and Rev. Fr. Daly being the present assistants.

The Universalist Society held its first meeting in 1836 in the room over the bank. In 1839, in connection with members of the First Church, an edifice was erected at the corner of Main and Summer streets, the building being removed, after the society had worshipped

a number of years, to Main street, where it is now known as Exchange Hall. This society disbanded in 1859, its pastors having been Revs. Thomas Whittemore and Sylvanus Cobb. In 1865, a new society was formed under Rev. Benton Smith and services were held in Rumford Hall. Rev. Phœbe Hanaford and others followed as pastors. In 1883, at nearly the close of the pastorate of Rev. M. R. Leonard, the present handsome edifice on Main street was dedicated. Rev. Mr. Leonard, during whose pastorate the society was materially strengthened, resigned in 1884, and was succeeded by the present pastor, Rev. L. P. Blackford.

The Waltham Corporation of the New Jerusalem Church first worshipped in 1860 in its chapel on Lexington street, which was also used for school purposes, the present school building being erected in 1864. The original chapel was destroyed by fire in 1869, and was rebuilt on a larger scale in 1870. It is a handsome stone structure, and although its interior is plain, it is nevertheless very attractive. Rev. Benjamin Worcester is pastor of the society and his father, the late Rev. Thomas Worcester, also occasionally preached. The New Church School is still continued. It has an excellent reputation as an educational institution.



BAND STAND ON THE COMMON.

Part II.—Municipal.

How often it happens that people living in a community where great attractiveness of natural scenery and location are combined with the more practical advantages of excellent schools, churches, railroads, and the other conveniences of modern civilization, fail to properly realize how delightfully they are situated and the numerous advantages they enjoy. Thus residents of Waltham find themselves not unfrequently listening with feelings of surprise to the words of the visitor in praise of the beauties and advantages of their city, beauties which more than one extensive traveller has pronounced unsurpassed even in the more widely famed lands of the Old World, and advantages arising from a wisely governed community, whose people, of more than ordinary intelligence, are alive to the progress and development of the age, and a location which affords almost every conceivable variety of life. It is confidently believed that these opinions are not an overestimation of the truth; but to impart through the practical medium of the printing press an adequate idea of them is by no means easy, yet it is hoped that, aided by the kindly desire of the reader to know more about the city, the task may be so well performed that the object in view will be accomplished.

LOCATION AND TERRITORY.

The map of Massachusetts shows that Waltham is situated about ten miles from Boston, in a westerly direction, in the centre of one of the most charming sections of eastern Massachusetts, where the advantages of both rural and urban life are most happily blended. In point of location, Waltham is on the same plane with its neighbor, New-

ton, the "Garden City" of New England; with Belmont, Arlington, and the other towns noted as the pleasantest communities in the graceful circle of towns and cities forming the suburbs of Boston. The city proper, the "village," if that term is applicable to a city, is located within a radius of three-quarters of a mile of the common, (in a few years, it is probable, to be known by the more dignified cognomen, "City Hall Park,") which in turn is very nearly at the geographical centre of the city. Charles River flows through the city from west to east, a few rods south of the common, dividing it in twain, and giving an opportunity for the appellations, "North Side" and "South Side," which are applied to the respective portions of the territory. The former is by far the larger portion and the older, as well, the South Side having been developed almost in its entirety within the past thirty-five years.

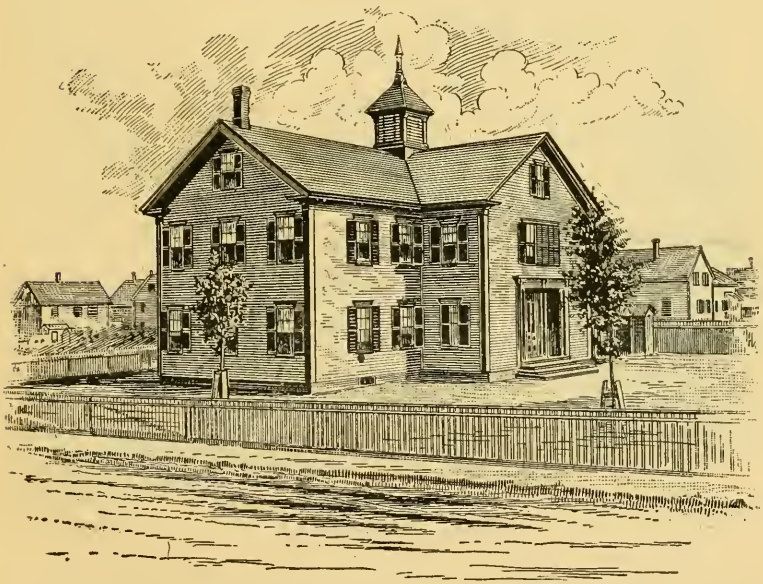
The business portion of the North Side is built upon what in olden time was designated as "Waltham Great Plains," a title giving an excellent idea of the territory, and which might answer very well for the South Side. The principal street is named "Main," it extending across the city east and west, through the centre, the street next in importance being "Moody," (named after the first superintendent of the Boston Manufacturing Company,) running from the former, across the river, to the Newton boundary. The city is not laid out with that rigid adherence to the "checkerboard-plan" of straight streets and perfect squares, so characteristic of many of the western cities, but there is sufficient diversion to give the city an individuality and the charm of variety. At a distance of from three-quarters of a mile to one mile northerly from the common extends a semi-circle of hills, towards which the growth of the city is rapidly approaching, and beyond which lies most of the land devoted to farming. In the earlier days of the town, North street, parallel with Main street and distant about a mile to the north, was practically the centre of population, but the progress of later years has wrought a great change and brought the centre to the vicinity of the manufactories; but North street must eventually become more thickly populated, for in that section are to be found some of the most attractive, beautiful and desirable sites for dwellings in the city.

In area the city comprizes about 9,000 acres, and there are between

2,600 and 2,700 dwellings, at least five-sixths of which are situated within a radius of three-quarters of a mile of the common, so that it will be noted that the city is very compactly built and that the churches, schools, stores, etc., are within ready distance of almost the entire population.

NOVELTY IN FORM OF GOVERNMENT.

Waltham possesses the distinction not only of being the youngest city in the state, but of also of having the most novel form of govern-

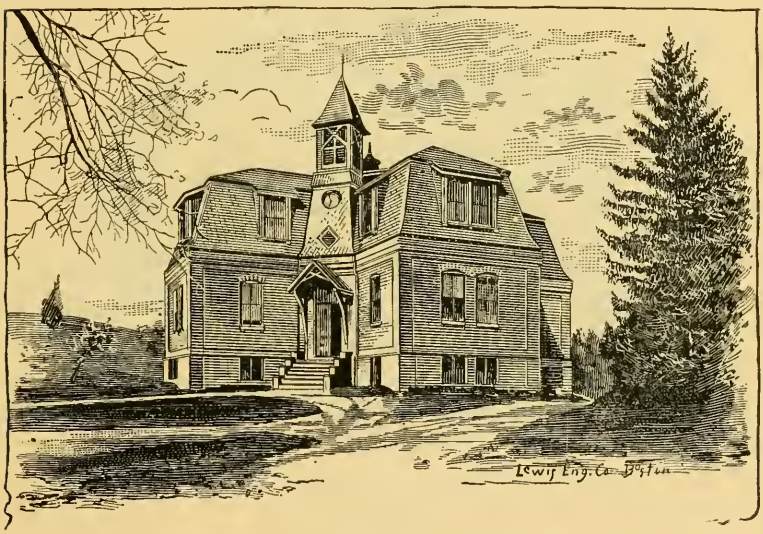


NEWTON STREET SCHOOL HOUSE.

ment, in that its charter provides for a single city council or board of aldermen, instead of the usual "two boards." This is such a "municipal experiment" in Massachusetts that a few words in explanation will be of more than ordinary interest, inasmuch as a considerable degree of attention has been attracted to the city on account thereof. The government of the city is vested in a mayor and a board of aldermen

of twenty-one members, three of whom are elected by and from the voters of each of the seven wards, the mayor being elected at large, the above and a school committee of nine members, chosen at large, being the only officers elected by the people. The mayor is chief executive officer, has advisory supervision of the several departments, is a member and the chairman of the school committee, (the legislature adhering to this old custom, it being the intention of the framers of the charter that the mayor should not perform this duty,) has the power of suspension and removal of officers subject to confirmation by the aldermen, control of the police force, the power of veto in general and of specific items in orders that do not meet his approval, but does not preside at the meetings of the aldermen, excepting when nominations are to be confirmed and a few other special occasions. The board of aldermen has general charge of the affairs of the city, makes the appropriations and directs in a general way their expenditure by the several boards, decides what shall and shall not be done, in fact, exercises the power and authority given to the dual boards in other cities. The usual city officers,—clerk, treasurer, auditor, assessors, overseers of poor, board of health, water commissioners, street commissioners, etc.,—are elected by the board of aldermen, and while exercising the general powers of their several offices under the statutes of the commonwealth, are under the direction of the aldermen. The latter and the members of the boards having charge of departments serve without salary, the more active work being performed by clerks and superintendents who receive compensation, so that, while the aggregate number of city officers, including those serving at elections, is but little less than two hundred, the total salary roll is within a few dollars of the amount paid for similar service during the last years of town government. The school committee has general charge of the schools and control of the buildings so far as relates to their use, the latter being kept in repair, heated, etc., by a board of commissioners of public buildings and grounds, who likewise have charge and the maintenance of a large portion of the city property, the creation of this board having been made necessary by the fact that members of the board of aldermen are prohibited under the charter from the direct expenditure of money, the functions of the

aldermen being exclusively legislative, the executive being entrusted to heads of the various departments; hence there are few standing committees of the board, and such as do exist relate almost entirely to its internal affairs. As a check against hasty legislation, the charter provides that all orders involving the expenditure of money shall have two separate readings, both of which shall not occur on the same day, while every order must also pass the scrutiny of the mayor. Another feature of the charter is that no officer of the city shall be interested in



NEW-CHURCH SCHOOL HOUSE.

any contract with or furnish supplies of any kind to the city; and while the effect of this provision is that the services of efficient men are doubtless lost to the city, there is abundant reason to show that it is productive of good. The first members of the boards of executive officers were elected for one, two and three years, and afterwards the places of those whose terms expire are filled by electing for three years; thus men of experience in municipal affairs are in office constantly, and were the aldermen to be elected in the same manner, and the mayor released from duty on the school committee, good results should ensue.

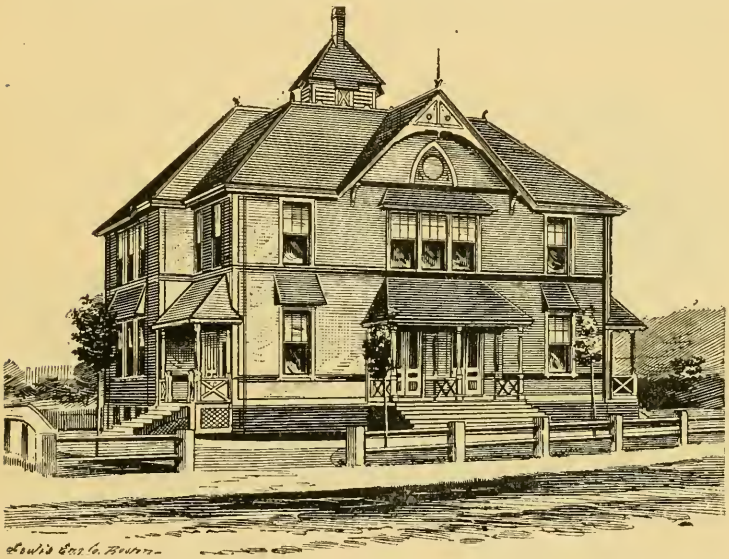
From the foregoing synopsis of the general character of the form of government it will be manifest that the legislature of 1884 made a radically new departure in incorporating the city of Waltham. A great deal of interest was awakened in the charter at the time of its adoption and the possibility of securing an improvement over the ordinary form of city government and the evils which in some instances are believed to be its accompaniment, were brought forward as reasons for the new departure. The experience of the first two years has been such as to show that these expectations have been realized. Little criticism of the charter is heard, the practical results have been highly satisfactory; the placing of the various branches of public service under the charge of so many individuals naturally gives the advantage of the concentrated thought and attention of men of a variety of opinions and there is closer attention to detail; there has been no attempt at extravagence and, aside from those arising from inexperience at the outset, there are few, if any, errors to amend; there has been no clashing, no friction; public officers are selected from the common, every-day, working people, who suffer most from oppressive taxation, and who pride themselves that their city is well governed and rapidly becoming the model city of the commonwealth: a city which is rapidly disproving the saying that corruption and extravagance are very natural consequences of the adoption of a city charter, and exhibiting a success and establishing a precedent which no town in the commonwealth need hesitate to follow.

FINANCES.

The assessors' figures show that the taxable valuation of the real and personal property May 1, 1886, was $11,398,764. These figures are not based upon a fictitious or inflated estimate of property; on the contrary, there is a belief that the gross amount would be considerably increased were much of the property in the business portion assessed at a nearer approach to its actual value. The assurance can be offered that, how ever desirable a readjustment of values may be, an inflation is not likely to take place, for the doings of the assessors have always been characterized by conservatism in this respect and a desire to pro-

duce equitable results, a careful comparison of the valuation for successive years clearly demonstrating this fact.

Under the laws limiting municipal indebtedness in cities, Waltham has a borrowing capacity of about $270,000, a limit which has not been reached. January 1, 1886, the gross funded debt was $135,000, which was decreased by the payment of $5,000, and increased by the appropriation and borrowing of some $100,000 for improvements imperatively



WEST MAIN STREET SCHOOL HOUSE.

demanded, (among which were included a new school house, new engine house for fire department, new streets, drains, replacing bridges destroyed by floods, and the purchase from the Boston Manufacturing Company of a tract of land adjoining the common, at a cost of $60,000, for the purpose of enlarging that park and as a site for a future city hall,) so that January 1, 1887, the gross debt was about $220,000. Of this debt $20,000 becomes due in 1887, and will probably be paid; but other improvements, incident to the demands arising in a rapidly growing community, are necessary, and therefore the debt must remain sta-

tionary, if it is not still further increased. In addition, expenditures must soon be made for systems of drains and sewers, (the city having practically decided to adopt a system of drains for surface water and another for sewage,) but as the state, through its future action in establishing a a sewerage system for the Charles River valley, will undoubtedly make suitable provision for the negotiation and ultimate payment of appropriations for the latter purpose, there is every reason to believe that no taxpayer will experience the slightest incovenience on account of such improvements. The resources of the city are abundant and most satisfactory. It has recently been decided to divide into house lots and dispose of the tract of land known as the "town farm," consisting of several acres and most eligibly located, and although the plan contemplates the erection of a new almshouse on other land owned by the city, by good management a sufficient sum should be realized to leave a handsome balance to be applied towards the liquidation of the debt.

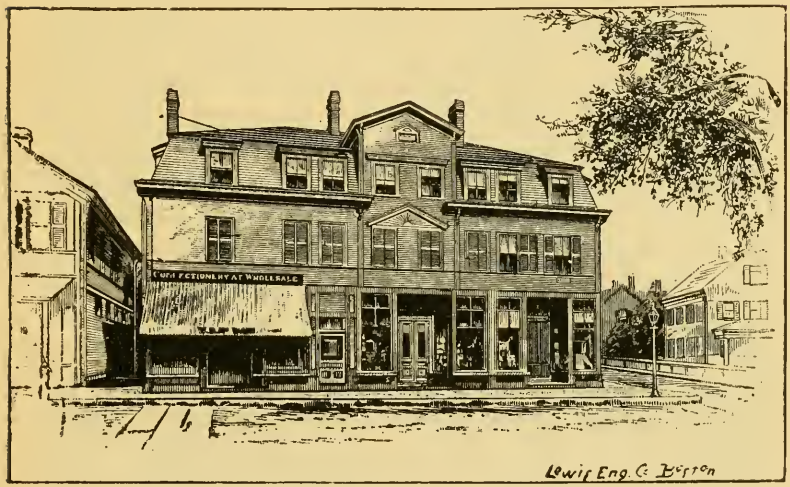
The amount raised by taxation has varied from $150,000 to $180,000 in past years and has not exceeded the latter figure. A policy of "pay as you go" has largely been pursued, save in the erection of public buildings or other works the benefit of which would be enjoyed in future years, and there is still a belief that this policy is the best. The tax rate in 1886 was $13.50 on $1,000, less than it has been for several years, which may be attributable to a desire to keep within the requirements of the statute requiring that the tax rate in cities shall not exceed $12.00 per $1,000, exclusive of the rate for appropriations for the city debt and interest thereon. It is safe to assert that this rate will not be materially increased; hence high taxes are no bugbear in Waltham, and the burdens of taxation rest lightly.

The financial standing of the water works is also excellent. The gross funded debt is $465,000, but this amount will not be very much ncreased, as the mains are extended in almost every section where the water will be needed for some time. The receipts from rates are such that a handsome surplus is had above expenses for the sinking fund each year, which must increase considerably in future years, so that the works are in a very prosperous condition and will be able to fully provide for the payment of the debt.

With the exception of a few loans funded a number of years ago the entire debt bears interest at four per centum, and the municipal bonds are negotiated at a handsome premium, showing that the credit of the city is excellent.

PUBLIC SCHOOLS.

In the department of public schools Waltham also stands in the front rank and has won a high reputation for the town and city in this



BUTTRICK'S BLOCK, MAIN STREET.

regard. The appropriation for schools is double that for any other purpose, although the expense per scholar is not above the average in the state, and the citizens and aldermen have always been ready to grant generous aid to any purpose that would increase their usefulness and efficiency. The city has been fortunate in securing able men to fill the office of superintendent of schools and a marked benefit has resulted; the policy of paying liberal salaries has secured a corps of efficient instructors, and in addition the care taken in making selections for this

service has also tended to the same end. With, therefore, efficient supurintendence, devoted instructors, a school committee to direct the whole whose members are zealous in their endeavors to enhance the character and effectiveness of the schools, and with all in the service ready to listen to suggestions, to examine and adopt, if found worthy, the results of the study and investigation of the most advanced minds upon educational topics, it very naturally follows that the schools rank with the best in the state, are equal to Boston schools, which in turn are the best in the country. There is abundant proof of the truth of this statement: it is so admitted by those competent to determine upon such matters; the excellence of the schools has been a principal factor in inducing people to become residents, and finally, there have been frequent attempts on the part of residents of adjoining towns to gain admission for their children to the Waltham schools by paying for their tuition, the applications for this latter privilege having become so prevalent that the School Committee has recently adopted a scale of rates for the tuition of non-resident pupils in the high and grammar schools.

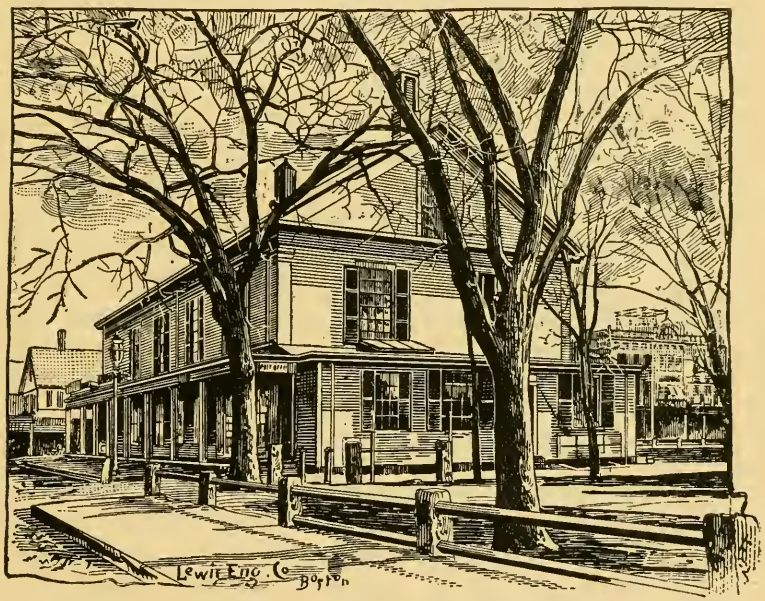
And while the attention paid to the devolopment of the mental faculties of the young people of Waltham is of so satisfactory and laudable a character, the conveniences for their care and shelter are of an equally high order. For a long time the school buildings were of a standard very similar to the average in "country towns,"—comfortable, but hardly abreast with the times. A first step towards permanent improvement was taken in 1869, when a large expenditure was made in erecting the present High and North and South Grammar Schools, and later, in 1872, another advance was made in deciding to eschew wooden buildings and by erecting the Heard-street building of brick, which has been followed in later years by the Bacon-street, Prospect-street, Orange-street and Grove-street buildings, the latter now in process of erection, making a decided change in the character of the school edifices and dispensing with the use of most of the older ones.

The experiment of imparting industrial education is just being attempted,—another expample of progressive management,—which bids fair to be successful. In addition to the day schools, evening common, commercial and drawing schools are maintained, for the accommoda-

tion of the working people, and they are an eminent success. To those seeking the best educational advantages for their children, in connection with a delightful place of residence, an inspection of what Waltham offers is urged, with the assurance that the time will be well spent.

THE HIGHWAYS.

The highways of Waltham a score of years ago were quoted extensively for their excellence, and it would appear that from the earliest



RUMFORD BUILDING, (CITY HALL) MAIN STREET.

days much attention has been paid to them. This reputation for fine roads was maintained for some time, and led to the example being followed by other cities and towns, so that while the streets are still in fine condition they do not appear so pre-eminently good because the poorer streets in neighboring communities have been greatly improved.

One reason for this excellence was an abundance of good material, easily accessible, the famous "blue gravel" being until recently very abundant, but so much of it has been used on the streets that this material is growing scarce, yet with characteristic good judgment the Street Commissioners are very zealous in obtaining the best to be had, both in gravel and crushed rocks, of which large quantities are used, all the streets being macadamized. These officials are very careful, also, not to neglect or show any favoritism in any part of the city's streets; consequently there is general satisfaction at their condition.

With a combination of well-built roads and admirable natural scenery, it naturally follows that pleasant drives and walks abound,—in fact, no portion of the suburban territory about Boston is more favored in these regards. Great pains have also been taken to secure well shaded streets, a result of the forethought of a preceding generation, while in later years the Town Improvement Society, and later still, the city itself, have carefully provided for the planting of shade trees, either in the streets or along their borders, so that a view of the city from any of the surrounding elevations shows an amount of handsome foliage hardly to be expected in the central part of a city. This policy is likely to be continued, for an appropriation is annually made for the purpose, and it must be considered a wise and judicious one.

POLICE AND FIRE DEPARTMENTS.

As the best of good order prevails in Waltham, her citizens being law-abiding and peaceful, the expenditure for police service is reduced to a minimum. The department consists of nine men, including the Chief of Police, and while it is possible that the addition of one or two more officers would secure a more ample patrol service, the department is efficient, and has been able to fully satisfy all calls for its services. In general quietude, good order and loss from the depredations of thieves, Waltham challenges comparison with any other municipality of its size and can show a far better record.

Notwithstanding there is a remarkable immunity from disaster by fire, the fire department is on a very efficient basis and is being con-

stantly improved. The apparatus is ample and a sufficient supply of water under pressure is obtained from the hydrants of the water works to render the services of the single steam fire engine necessary only in exceptional instances. As but few of the men comprising the department are on duty constantly, the expense of its maintenance is comparatively small, and yet the interest taken in the performance of duty and the care and improvement of the apparatus is such that the department is really as efficient as the more costly departments of some other cities, especially as the number of fires is much below the average of places of equal size and where wooden buildings predominate. As a natural result the rates of insurance are low.

WATER SUPPLY.

As intimated, the water works are an important ally of the fire department. The water supply is one of the finest in the state and its quality is unsurpassed. In locating the pumping station on the banks of the river, it was proposed to draw from that source by infiltration, but in constructing the filtering basin several very large springs were opened, from which the supply is entirely drawn, experiments having demonstrated that scarcely any water enters the basin from the river. The quality of the water has remained, although the supply has fallen a little below the quantity demanded by the increased population, but steps have been taken to increase the supply, as well as maintain its purity, by the purchase of a number of acres of land adjoining the pumping station, by which it is believed the supply will be augmented so as to serve for a long term of years. Owing to the improvements which experience has prompted, there are three methods by which water can be supplied to the consumers: first, by pumping into the reservoir and permitting the water to flow by gravity into the mains; second, by pumping through a channel made for the purpose in the embankment of the reservoir and thence into the pipes, and third, by pumping directly into the pipes, using the main extending to the reservoir as a stand pipe; thus combining the advantages of several systems of water supply, each of which is well known. The reservoir

is located a short distance from the pumping station in a natural depression between two hills, one of which bears an ancient landmark, known as "Boston Rock," and from its vicinity a delightful view is to be had.

NATURAL SCENERY.

Among the advantages possessed by Waltham, a feature that all can enjoy with equal freedom and pleasure, is the beauty of the natural scenery. While it may be that its hills and dells do not possess the grandeur of the Alps, its peaceful river the sublimity of Niagara, nor its buildings the architectural splendor of Paris, yet there is beauty of another character, there is much that is attractive, pleasant to look upon and dwell amidst. The residence portion of the city is pleasant because of the well-kept and splendidly shaded streets and the comfortable, home-like appearance of the dwellings; there are few palatial residences, but their general character is such that an excellent impression is imparted, and the diversity of architectural taste gives an added charm, especially among those houses which have been planned with a view to personal occupation. The senses are also delighted by the results of the care bestowed upon the grounds about the residences, and so general is this desire to make home and its surroundings attractive that even the most humble make some pretensions of this kind. The outskirts of the city are made charming by the handsome estates, well-tilled farms, and a blending of all the forms of rural scenery, and their enjoyment is doubled by the excellence of the roads. Let one drive in whatever direction he chooses, a delightful experience is sure to be the result. Whether one visits the famous "Waverley Oaks" and the beatiful little cascade near by, driving through Lyman and Beaver streets, past the fine estates of Messrs. Lyman, Paine, Sears, Warren and others, and thence over the hills of North street from whence delightful views are had; or if the fancy leads one by the historic "Gov. Gore place," now owned by Mr. T. W. Walker, and the Farnum, Bright, Bowker and Allen estates on lower Main street; or if the north-western farming territory, with its upland and meadow and forest-shaded roads, is visited; or, again, if South street is chosen and you seek the newly-

developed "Roberts," with its several handsome estates, the picturesque paper mills and the extensive work constructed by the city of Cambridge as a storage basin for its water supply; or should you visit the falls at Stony Brook and the "Devils Den" close by, or simply stroll through the streets of the "village,"—should you attempt either of these walks or drives, the assurance is offered that it will be an event fraught with the keenest pleasure, and one will be both surprised at

EAGLE BLOCK AND WHITFORD BUILDING, MAIN STREET.

and charmed with the beauty of the landscape and the views from the many elevations.

The most noted of the elevations is Mount Prospect, whose summit is 482 feet above the sea level,—not a remarkable height, surely, yet the view is unsurpassed in this vicinity, and from its position and relative height it is one of the most prominent hills in the state. To

give an idea of what may be seen from Mt. Prospect the following article from the pen of Mr. E. G. Chamberlain, of Auburndale, a gentleman who has given the subject much attention, is quoted:

"The White Mountains cannot be seen from Prospect, nor from any point near Boston. A range sometimes called the 'backbone of Massachusetts' crosses Worcester County from south to north, and generally limits the view toward the west. Its three principal summits,—Asnybumskit in Paxton, Wachusett in Princeton, and Watatick in Ashburnham, are conspicuous. Wachusett, midway between the other two, is nearest and highest. It is thirty-three miles distant and 2,018 feet above sea level. It is in line with but exactly opposite in direction from the State House. Watatick, far to the right of Wachusett, resembles a huge haystack. It is thirty-nine miles off and 1,847 feet above the sea. This range the eye may follow far into New Hampshire by Barrett and Kidder Mountains in New Ipswich, the Temple Mountains, the two Pack Monadnocks near Peterboro', Crocket Mountain in Francestown and Kearsarge Mountain in Warner. Pack Monadnock is a remarkable mountain, with two equal summits about 2,200 feet above sea. Its southern peak is northwest and forty-six miles distant. It is directly over Lincoln village, which we see four miles off. This mountain has answered in various publications for the Green Mountains, and for nearly every prominent mountain in New Hampshire. Kearsarge is the most distant point visible, being 75¼ miles distant. It is 2,948 feet above sea. Over this range may be seen the Grand Monadnock, a little to the left of north-west and just to the right of Watatick. It is 54½ miles distant and 3,177 feet above the sea. This is the highest mountain visible. In southern New Hampshire, east of the range mentioned, are several isolated mountains, of which we can see, among others, Pinnacle in Lyndeboro', Joe English in New Boston, and the two Unkonunocks in Goffstown. The latter are just north-north-west and about forty-five miles off. Close to the left hand edge of the western Unkonunock is seen the distant Kearsarge. More to the left is solitary, dome-shaped Joe English.

"Coming back to our own state, we can see to the west of north, Bedford village, nearly eight miles off. Beyond and to the right is the city of Lowell. Nearly north is Billerica, twelve miles distant. About north-north-west is Andover, nineteen miles away. More to the right is Bald Pate Hill in Georgetown, twenty-five miles off. About north-east is the State Lunatic Asylum in Danvers. A little north of east is Nahant. Over this we see Egg

Rock and its lighthouse. Looking easterly we see Boston and its adjacent cities and then the harbor. The State House is N. 102° 5′ E. from the true meridian, and will serve to correct the compass. At its right we see successively Boston lighthouse, Long Island lighthouse, Forts Independence and Warren, Nantasket, and the Atlantic House. The latter is twenty-two miles distant, about east-south-east. To the east is Massachussetts Bay. The sea horizon line crosses this at a distance of twenty-nine miles. Sails of vessels may be seen much farther off, their hulls being hidden by the earth's convexity. Towards the south-east we look down into Waltham village. Over it we see Newton, Newtonville and Newton Centre. Over the latter we see the Quincy portion of the Blue Hills range. Following this to the right we see Blue Hill in Milton, 635 feet above the sea and fourteen miles distant. A little to the right is West Newton. Over this we see Stoughton, twenty miles off. To the right of this, and just south-south-east is Dedham, 10½ miles away. Nearly over the watch factory is Newton Upper Falls. More to the right is Sharon, more than eighteen miles off. About south is Auburndale. Over it we see several villages in Needham. About south-south-west is Franklin, with the Dean Academy, 22½ miles off. To the right of it is Woonsocket Hill in Rhode Island, thirty-two miles distant. Nearly under this appears Winthrop Pond in Holliston, sixteen miles away.

"About south-west is Hopkinton, seventeen and a half miles off. Turning far towards the west, we see Marlboro', fifteen miles distant, directly in line with Asynbumskit Hill. About west is Rutland, nearly thirty-six miles distant. Turning still to the right we see Princetown, thirty-two miles off, just left of the Wachusetts. Between south and south-east, Charles River is a noticeable feature. I have mentioned only some of the more prominet objects to be seen. I have indentified some prominent building in more than seventy-five villages, with others uncertain as yet."

The above practical account of what is to be seen from Mt. Prospect may be supplemented by the statement that the view is also one of incomparable beauty. On the one hand the eye is greeted with an extensive range of rural country, embracing distant villages, cultivated fields, hill-tops and mountains; on the other hand the entire suburbs of Boston, with that city, its harbor and the more distant bay, form a picture pleasant to look upon, while almost at one's feet lies the city of Waltham, with its beautiful river slowly flowing onward to the sea.

Mt. Prospect is much frequented by the citizens and also by the residents of adjoining commmunities, who are so delighted with the view that one visit is sure to be the precursor of many others. It is the fondly cherished desire of many of the progressive citizens,—perhaps it would be equally truthful to say the desire of all the citizens, without qualification,—that Mt. Prospect may eventually be secured as a public park. Surely, such a laudable ambition is worthy of continual effort towards its accomplishment, and it may be that the several land owners will ultimately be induced to look with favor on this project and make a satisfactory disposal of their property to the city.

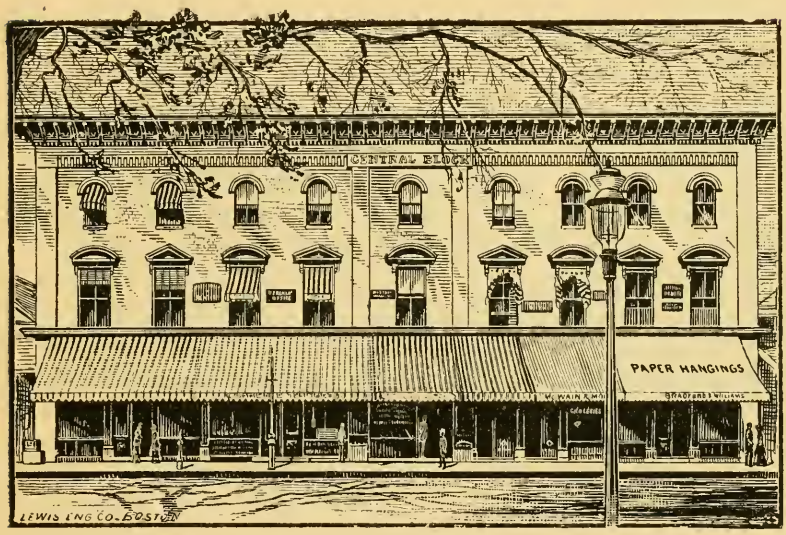
Charles River adds much to the attractiveness of the city, and of its beauties much has been written. Originally a narrow and perhaps unimportant stream, the dam erected by the Boston Manufacturing Company expanded a goodly portion of it into a slowly-flowing, lake-like river, oftentimes of generous breadth, forming numerous coves wherein the water-lily grows in profusion: its course is sinuous, its banks for the major part wooded, and as a whole its scenery is of the most charming description, forming an ideal place for pleasure-boating, while a little search reveals capital picnic-grounds. The "Waltham River Carnival" which annually takes place on the river, has gained a wide celebrity. It is held in the evening and consists of a procession of illuminated boats, decorated to represent fanciful shapes, prizes being offered for the best displays, and accompanied by a display of fireworks. So beautiful is the scene and so much interest has been awakened in these events that the last carnival was witnessed by over 20,000 persons, there being nearly 200 illuminated craft in the procession.

During the summer season a little steamer makes several trips daily from the Moody street bridge to the bridge, distant some two and a half miles, at Auburndale. These trips are made over the most delightful parts of the river, and the scenery is so varied and beautiful as to attract visitors from a long distance, all of whom unite in pronouncing the experience a most thoroughly enjoyable event. Longfellow has sung of the beauties of the Charles, and although his lines refer more particularly to another portion of the river, they are nevertheless very appropriate in this connection.

There are many other attractive spots and features of local scenery of which notice could be made; but the idea has been to present only a sufficient number to awaken the interest of the reader and create a desire to know more.

SOCIAL AND OTHER ATTRACTIONS.

Social life in Waltham is undeniably attractive and enjoyable. Every variety of secret society—the Masons, Odd Fellows, the several



CENTRAL BLOCK, MAIN STREET.

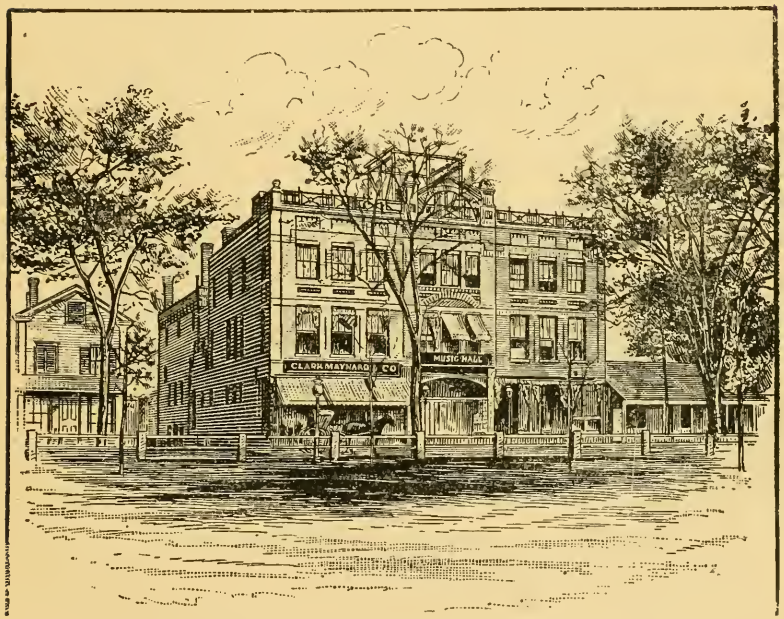
beneficiary and the temperance organizations—is represented, besides which there is a number of social clubs, and, therefore, with the many attractive features connected with the nine churches, aside from the spiritual benefit derived from their religious services, there is always some pleasureable event to anticipate. A prominent feature is the existence of several charitable organizations, and a vast amount of good is accomplished through the devoted and unselfish endeavors of the members. The private social gatherings are in the greatest degree un-

ostentatious and marked by an apparent earnest desire to impart and receive the greatest amount of enjoyment, while the same feeling pervades, with equally pleasing results, all public social gatherings, where the citizens meet upon the same plane, in a truly democratic manner, making social intercourse of the most happy character. The ability possessed by a large portion of the citizens in the realms of art, music and literature is such that a large number of profitable entertainments is offered. Among these may be cited the annnal exhibits of the Pencil and Brush Club, whose members execute some very creditable work with either pencil, brush or crayon; the concerts of the Choral Society, which rank with the best from similar societies in the state; not forgetting the important part taken by this talent in the entertainments given by the numerous societies, embracing all branches, from the presentation of a drama to the plainest form of concert. The season at Music Hall affords an opportunity for patrons of the theatre to avail themselves of such privileges, and the proximity to Boston, the low fares and frequent trains, make easily accessible the manifold attractions there to be found.

Waltham Music Hall, mentioned above, was erected in 1880 by a corporation formed among the citizens for the purpose, the late William E. Bright being the first president of the company and taking a very active part in its organization, as did also the present president, Mr. Thomas P. Smith. The property, located on Elm street, consists of a a front brick building of three stories, containing two large stores, with the main entrance to the hall in the centre, and offices and other apartments above. The hall proper is situated in the rear and is connected with the front building by a structure of one story containing the main corridor and ante-rooms. The hall has a seating capacity of 1,037; the stage is 30 by 60 feet, with a proscenium arch 26 by 30 feet, while the floor of the hall is so constructed that it can be elevated for dramatic performances and lowered to present a level surface for general useage. There are ample dressing rooms and a large banquet hall in the basement, and a full equipment of scenery and other accessories.

A majority of the citizens find employment in the several industrial establishments or are engaged in business for themselves in the city,

but there are also many residents engaged in business in Boston, and who make Waltham their home because the city is so conveniently reached and so desirable as a place of residence, and among this number are some of Boston's most prosperous and successful merchants. These latter people do not form a community by themselves, but their homes are scattered about in pleasant parts of the city. The beauty of some of the unoccupied building sites has recently induced several gen-



MUSIC HALL BUILDING, ELM STREET.

tlemen of wealth to erect handsome residences for themselves in the outskirts of the city, and there are many more locations, fully as desirable and attractive as those already selected, awaiting similar owners.

Lady readers will be pleased to know that every variety of retail business is represented, and that consequently there is an excellent opportunity for "shopping," while purchases can be made upon as favor-

able terms as in Boston, with the further advantage of the feeling that one is dealing with well known persons and that errors can be readily corrected without annoyance. Although a number of the stores are not located in very imposing buildings, the march of improvement is beginning to create a reform in this direction, as illustrated by the excellence of the business blocks recently constructed.

TRANSPORTATION.

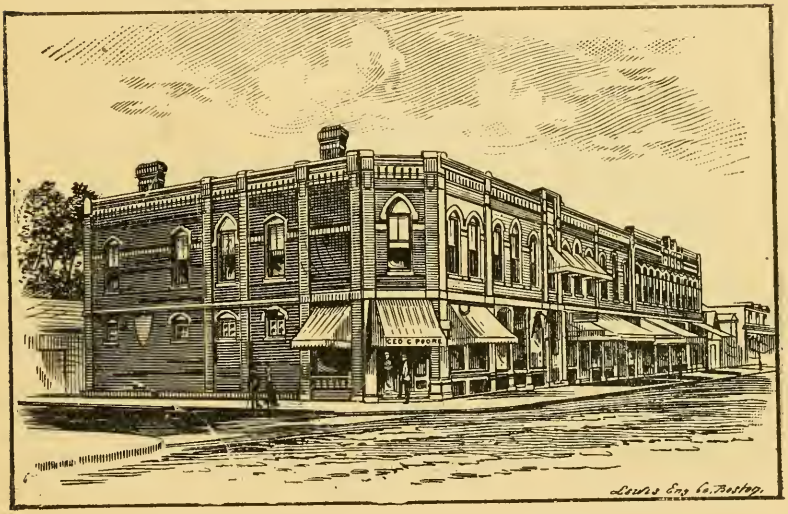
First in importance of the steam railroads is the Fitchburg, the "Hoosac Tunnel Route." Waltham is one of the most important stations on this great through line in the way of revenue from passenger and freight traffic, and in return the citizens receive a train service unsurpassed by any other city in eastern Massachusetts, there being over thirty trains daily to and from Boston, which are run at very convenient hours of the day and early night, in addition to late theatre trains and a sufficient Sunday service. On the main line of this road there are stations designated Clematis Brook in the easterly part; Beaver Brook nearer the centre; the main station: Riverview, in close proximity to the watch factory; Roberts, in the westerly section, and Stony Brook, just over the Weston line; while on the Watertown Branch—leaving the main line at West Cambridge and joining it again at Waltham,—there are stations named Bleachery (from the Boston Manufacturing Company's works,) and Chemistry, recently changed to Newton Street, the latter being on the South Side, and all of the former on the North Side. These depots are so located that the residents of all sections can take the cars at a very short distance from their residences, the running time to Boston on the main line being from 20 to 35 minutes and on the Watertown Branch about 40 minutes.

A feature of the railroad accommodations worthy of special mention is the readiness with which special or extra trains are run between Waltham and Boston by the Fitchburg on occasions when any event of particular interest to the citizens is to take place in the latter city. This service is oftentimes voluntary, and in commenting on that fact a local paper recently said—

"If there ever was a time when the Fitchburg Railroad was too conserva-

tive in furnishing accommodations for passengers, that time has long since passed away. The unceasing efforts of its managers to accommodate suburban patrons in running extra trains on desirable occasions has been appreciated by the public, as shown by the liberal patronage. The intelligent classes desire to have their homes near a railroad which will give them facilities for reaching the intellectual and artistic enjoyments of Boston. The Fitchburg is sowing for the future, and it will no doubt reap, as it deserves, an abundant harvest."

Running nearly parallel with the tracks of the above road and just north of the business portion, is the Central Massachusetts Railroad,



CONNELLY'S, AND WARNER'S BLOCKS, MOODY STREET.

which has recently been leased by the Boston & Lowell for a term of 99 years. This road is still in what may be termed its infancy; the number of trains is small, yet a goodly number of people are accommodated, and the prospects are good for a largely increased business, especially when the adjoining territory is more fully developed. There are three stations on this line, Clematis Brook, Waltham and Hammond Street.

In the matter of fares, Waltham is particularly well favored; on

both roads single tickets to and from Boston sell for 17 cents; a ten trip ticket at $1.50, and a one hundred trip at $9.75; the latter ticket being in very general use, and therefore there is little to be desired in this respect.

A great amount of freight is delivered in and taken from Waltham, the Fitchburg handling by far the larger portion, owing to its proximity to the leading industries. The management of both roads deals very liberally with shippers of merchandise and rates are equitable. The facilities for handling freight are not all that can be desired, but improvements are now under way which will give, particularly on the Fitchburg, a freight yard, commodious, well located, and very convenient, while the construction of a new and more imposing central station will soon be commenced by this road.

There is but one purely local corporation furnishing transportation, —the Waltham & Newton Street Railway, extending from the depot of the Boston & Albany Railroad in West Newton to the westerly part of Main street in Waltham. This road passes the watch factory and has a patronage sufficient to pay the running expenses, but the return to the stockholders has been small. The company is about to extend its tracks in other streets than those through which it now passes, and as it already is a great convenience, it is highly probable that in the early future the road will be on a paying basis.

There are also a number of local express companies which transfer merchandise, both by rail and "over the road," between Waltham and Boston. This service is well rendered and is principally made use of by the merchants.

TO MANUFACTURERS.

The advantages presented by Waltham to manufacturers are many. In the first place, the tax rate is as low as in any city in the commonwealth, and is based on a fair and equitable valuation. Insurance may be placed at a low premium, the abundant water supply and efficient fire department being important factors in this connection. The city is situated advantageously and in close proximity to the largest markets, is within telephone call of Boston, the telegraph service is good, mails

are frequent and direct to and from the largest cities in the country, and merchandise can be shipped, either by freight or express, in any direction, expeditiously and favorably, there being the advantage of a location on one of the western trunk lines. There is an abundance of intelligent, skilled labor, and thus far there has been a marked immunity from all labor troubles. While there are few unoccupied buildings suitable for industrial purposes, land is abundant in desirable locations, convenient to the railroads, etc., and there is a general desire on all sides to extend to those desiring to engage in manufacturing or remove

HARRINGTON'S BLOCK, MOODY STREET.

their industries thither every possible advantage and assistance. The facilities for obtaining building material are excellent; there are two large lumber yards, the city is within short distance of the several brick yards at Cambridge, and there are also several stone workers from whom granite and other like material may be obtained. Likewise coal and supplies of all kinds are obtainable at as advantageous prices as in any city near Boston. An examination of the successful condition of the present industries and the advantages they enjoy will yield convincing

evidence that the city is second to none in this vicinity as a location for manufacturers.

IN CONCLUSION.

It has been the endeavor in the preceding pages to present such information regarding the city of Waltham,—an outline of its history, its municipal and industrial advantages, the characteristics of its population, its attractiveness as a place of residence,—that the reader may be made interested in the city, desire to know more about it, and, the most important object of all, be induced to seek a personal participation in its advantages. It is confidently asserted that the picture has not been overdrawn; on the contrary, there is a feeling that the task undertaken may not have been fully performed. The field is so broad, the varied attractions so numerous and well worthy of the most thorough examination, that ample justice may not have been done them. Of many features of a city's attractions it is very difficult to present graphic descriptions, and hence it will be understood that it has not been attempted to enlarge upon any one point at the expense of another.

Primarily, the attention is directed to the statements advanced to show that Waltham is a beautiful, well-governed, progressive and self-contained municipality, capable of proving an enjoyable abiding place for all classes of people. Many new residents have been attracted to Waltham because of the facility with which they could secure employment: others have found the advantages offered by the schools to their children a convincing feature: merchants have come because they saw a good field for business in a growing community: others have found the frequent trains and low fares an inducement to build for themselves or lease comfortable homes away from their business in Boston; and so something has been found to render the city enjoyable to its citizens. Certainly, the disadvantages of a residence in Waltham are few and it would be difficult to indicate any such feature, excepting it may be that those who are fond of the busy tumult and excitement of the great metropolis will not be pleased with the more conservative life of a suburban city. That the community is a healthy one is shown by the fact that the death rate in 1886 was but eleven in each 1,000 of popula-

tion, a result largely attributeable to the efficient work of the Board of Health during the past few years.

Having thus faithfully attempted to compile an outline of the inducements offered by Waltham to people to become residents and to manufacturers to locate therein, but little more can be offered further than to request of those who have received a favorable impression of the city, that they make a personal investigation and ascertain if the actual state of affairs will not more than substantiate the statements made. If this be done, it is confidently believed that the mission of this little volume will be accomplished, in bringing about accessions to the population, industries, wealth and well-being of the progressive city of Waltham.

WELCH'S BLOCK, MOODY STREET.

Part III.—Industries.

The following pages contain sketches of the development of some of the more prominent industries, which have been prepared in order to give an idea of what the business of the city consists; also to show how important a part they have sustained in the city's growth, and not wholly in praise of the several manufactories and their productions. The progress of these industries forms an interesting study. Particularly is this true of the older manufacturing companies, which have contributed so much to the city's prosperity.

Of industrial Waltham it may be said that here was established the first cotton factory in the United States in which cotton cloth was produced from the raw material by machinery under one roof; the first watch factory in the world, now also the largest and the only one producing a complete watch; the first and largest crayon manufactory on either continent; the only company in the world that has designed, equipped and superintended the erection of a watch factory. There are other industries of which similar mention might be made, and it can certainly be said of all that the reputation which has become attached to the name "Waltham" is such that any article bearing that trade mark is at once accepted as being of the first and best quality.

To the careful reader it will also be apparent from the perusal of these articles that as Waltham was one of the very first towns to make the quality of its roads the standard for other towns and furnish competent persons to execute like improvements elsewhere, as well as to take the initiative in divers other public improvements, so also has the town sent from its pioneer industries men to unite with capital and found similar establishments elsewhere. Likewise does the industrial world give much credit to Waltham genius for many of the most useful and valuable improvements of modern times.

WORKS OF THE AMERICAN WALTHAM WATCH COMPANY, CRESCENT STREET.

AMERICAN WALTHAM WATCH COMPANY.

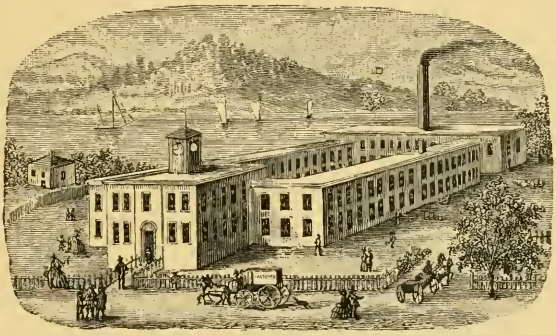
Within the past score of years there have been many attempts at "writing up" the great industry known as the American Waltham Watch Company, and it has been the unvarying rule that the introductory sentences of such sketches related to the early struggles of A. L. Dennison and others to establish the manufacture of watches: to extend to the art of watchmaking the thoroughly American idea that in metal-working, as well as many other things, to produce the best and most economical results manual labor must be made subordinate and be availed of in the smallest possible degree, and that almost entirely in the operation of machinery. It is the present purpose to deal briefly with the early years of this industry; and, therefore, after the statement that the efforts of these inventive and venturesome men resulted much the same that the efforts of so many practical mechanicians often do—in failure to achieve the financial success thought possible—and it was left for other minds to perceive and utilize the value of their experiments and ambitions to build up a new industry, the reader is introduced to this enterprise at a time when the first failure had been made, when the factory, started at Roxbury, Massachusetts, had been removed to Waltham, where it became known as the Boston Watch Company. It had been demonstrated that watches could be produced by machinery, but that in that fact was hidden one of the greatest industries of the nineteenth century was not developed until later years, after the property had passed from the hands of its original owners and after successive changes a corporation had been formed under the name of the American Watch Company, in 1858.

At that time the factory consisted of a small concrete building of two stories in the form of a hollow square, each side about 100 feet in length, and some 75 workmen were employed, the capitalization of the company being $200,000. The now populous South Side was very sparsely built upon, much of the territory, of which the watch company through its union with the Waltham Improvement Society became owner of a large section, being devoted to cultivation or covered with a thick growth of woods; and far-seeing indeed must have been the mind that could foretell that from such a modest beginning would be evolved the present mammoth industry.

It was not until the civil war was well under way that the business of the

company received any marked impetus; but then there came a sudden and immensely increased demand for watches, which the company was not slow to perceive and realize as its golden opportunity. Then its business grew apace and all was bustle and activity; old buildings were torn down and new and larger ones erected; the productive capacity was multiplied many times, yet scarcely kept pace with the demand; the employes received high wages and very substantial profits were realized from the sale of the watches; the fame of the company extended from ocean to ocean, and even to foreign lands. Nor did this increase of business cease with the close of the war: in spite of the familiar exclamation, "Where do all the watches go to!" and of repeated assurance that the business was being overdone and must eventually end in financial ruin, the industry continued to increase and prosper, and new markets were developed at home and abroad, until the Waltham watch is a familiar friend and companion in every land, in every clime, wherever it is desired to note the lapse of time. Therefore, in 1878 the demand for increased facilities was so pressing, notwithstanding the additions repeatedly made, that it was decided to abandon the already large series of frame buildings and erect new and larger ones of brick. This change was made—the entire factory was rebuilt—with scarcely any interruption to the regular routine of work, a feat that is a sufficient acknowledgment of the ability of the management; the task occupied five years, and that some idea of the magnitude of it may be imparted, the following statistics are quoted: The buildings have a frontage on Crescent street of over 700 feet, with numerous wings extending towards the river, and enclosing three inner spacious courts, besides an elegant suite of offices at one end and an observatory at the other; the floors cover nearly five acres; there are 3½ miles of work benches, mostly of cherry plank, 2 feet wide and 2 inches thick; 4,700 pulleys, 8,000 feet of wall rods, 10,600 feet of main shafting, 39,000 feet of belting, ranging from 2 inches to 2 feet in width; the machinery is driven by a Corliss engine of 125-horse power. The company employs its own carpenters, painters, pipers, etc., and is in every way a self-contained establishment. Abundant light is furnished by the large windows, and for night work there are 200 incandescent electric lights and over 4,000 gas lights. There are about 23 miles of water and gas piping, and gas is used in 38 furnaces for fuel. The sanitary arrangements are excellent, and much attention has been given to the matter of ventilation. The number of employes is nearly 2,500, and about 800 persons are employed in the manufacture of cases in New York, making a grand total of almost 3,300.

At the incorporation of the company some 5,000 watches had been made; now the company is working upon its *fourth million*, (surely, an almost inconceivable number of watches,) the capacity being upwards of 1,500 per day, and the arrangement of the factory is such that this number can be readily increased if found necessary. From the small capital at the beginning, the stock has from time to time been increased until it now amounts to $2,000,000. In 1885 the name of the company was changed to the American Waltham Watch Company, in order to secure to it any advantage that might ensue from the use of the name Waltham by a watch producing corporation.



VIEW OF THE WORKS IN 1858.

And while the watch company has shown such remarkable and substantial growth, its neighborhood has undergone an equal metamorphosis. Where once the boys and girls of 1857 visited the woods and fields and searched for nuts and berries or drove the cows to pasture, the visitor to-day finds a thickly settled community, embracing almost the entire South Side, which is practical evidence of what the development of the watch industry has accomplished for Waltham. The watch company is owner of quite a number of dwellings, of both single, double and even a larger number of tenements, in this section, in addition to two large boarding-houses, the Shawmut House and the Adams House, (the latter having been rebuilt, enlarged and elaborately furnished with every modern convenience in 1866, forming a delightful home for those of the employes who prefer such manner of living,) but the larger proportion of the dwellings are owned by their occupants, foremen and other employes in the factory or those who formerly worked there. But this is no ordinary "factory

village:" in many respects it is without a rival in the world, is unapproached even by the famous town of Pullman in Illinois, because a larger proportion of the people are house-owners; and one not acquainted with Waltham would be loth to believe that the occupants of the many well-built and architecturally attractive houses, with their often spacious and always well-kept lawns, bordering on luxuriantly shaded streets, were "toilers in a factory." Nevertheless, such is the case, and it is a fact that is high praise for the men and women employed in watch-making: their handiwork is a sufficient guarantee of their skill; the taste displayed in erecting and furnishing their homes and the care bestowed upon their surroundings show equally well that they are people of cultivation and refinement. Still further proof of this is seen in the display of literary and musical ability, the American Watch Company Band, incorporated by several of the employes and composed entirely of their number, ranking as one of the finest military bands in the state. If further example of their ability is desired, it may be added that a number of the employes are among the most capable city officials, several having served in the board of aldermen and one of the foremen having been elected mayor for the year 1887. In the summer time the South Side, with its shaded streets, attractive dwellings, handsome lawns and numerous flower gardens, is a very bower of beauty; and were the managers of the watch company unsatisfied with the success of their actual industry, they surely can find a source of ample satisfaction in viewing the model city that has been a result of their labors.

Like its older companion, the Boston Manufacturing Company, the American Waltham Watch Company has in other ways proved a good friend to the town and city of Waltham and has been of marked assistance to the community. Not the least of its work has been the laying-out and maintenance of two beautiful parks on Crescent street opposite its works, which, in connection with the care bestowed upon the factory grounds, makes the immediate vicinity of the works attractive in the extreme.

There have been numerous changes in the board of officers since the incorporation of the company, but Mr. Royal E. Robbins has remained the treasurer and general manager during the intervening thirty years. What natural, justifiable pride must be the share of one who has been so largely instrumental in bringing about such marvellous results; with what satisfaction one must view the work of a life time passed in creating such an industry and in gathering such a corps of skilled workers, from whom scarcely an unpleasant word or act was ever had. Such accomplishments are a greater display of

good generalship than the command of a victorious army, and are worthy of a high place upon the rolls of fame.

Likewise a due acknowledgement is made of the successful efforts of the present president of the company, Mr. E. C. Fitch, who for the past four years has performed the duties of general manager or agent at the works. His intimate knowledge of the business, gained from a long partnership with the selling agents, his mechanical and inventive talent and his thorough training as a business man, fully furnish him for the responsible place he so successfully fills.

Having thus noted the substantial growth of this company and the excellent reputation established by its employes, it remains to note something of the progress made in the actual manufacture of watches and their improvement. In recognizing the watch movement purely as a machine, the early introducers of this great industry laid the foundations to future success, and it is in the carrying out of this fundamental principle that a world-wide reputation has been won for the Waltham watch. One of the first steps was to simplify this "machine," to make it of fewer parts, at the same time adapt each part to the other, to produce a synchronous whole; the greatest pains were taken to secure a perfect original model of a movement, and this being done, it was attempted to secure a perfect interchangeability of parts, which has been so successfully accomplished that should any part fail in actual service, the owner has only to send the number of the watch movement to the factory to secure an exact duplicate of the part. The numerous experiments, months of arduous labor, the various methods by which the watches were brought to the present high standard of excellence, would prove an interesting study, especially as contained therein would be found the development of many automatic machines—wonderful in their accuracy, delicacy of operation, and as marvels of mechanical ingenuity,—which have been an important factor in such improvement. Upon this basis the improvement has been continued; the effect of the improvement of one part upon another and upon the whole, has been carefully studied; the desire to enhance the value of the watch as a durable time keeper has extended to a careful, rigid examination of the most unimportant part, and nothing has been neglected in the earnest endeavor to produce the best in the world.

To produce a watch movement of ordinary grade some 3,750 distinct operations are necessary, so that it will be seen that volumes might be filled with interesting descriptions of the various processes through which the rough ma-

terial passes from its entry into the factory, until it departs a completed watch; that still other volumes could be made entertaining in telling of the automatic machines evolved by the skilled employes, and that there would then be much unsaid regarding the advantages and adaptability of time-pieces produced with such remarkable fidelity to theoretical and practical horology, and also to accuracy,—many of the measurements being so microscopically fine as to permit of a variation not exceeding one-ten-thousandth of an inch.

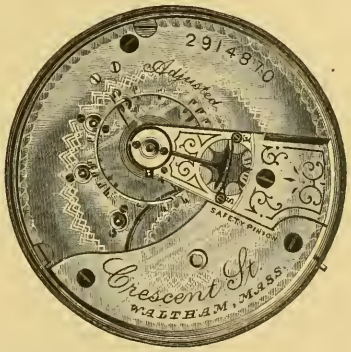
The increased value which skilled labor in watch making adds to raw material is also an interesting feature. For example, from a pound of steel wire, costing about $5.00, are made 247,000 minute screws, worth $1,700. Again, the average weight of a movement is about one and one-half ounces of metal, nine-tenths brass and one-tenth steel, costing $3\frac{1}{2}$ cents, while the finished movements are worth from $3.50 to $100 at manufacturers' prices. Still other examples of a like nature might be cited, as well as others equally instructive and illustrative of the value of the precious metals and jewels used in the production of watches.

The American Waltham Watch Company is the only company in the world which makes a complete watch. This may seem a rather broad statement, yet it is undeniably true. In other watch factories in this country, (the Waltham company is the parent of all, several of them being started by talent brought from its factory,) some portions of the complete watches are not made but are purchased from other manufacturers, and the same is true to an even greater extent of the foreign watchmakers, many of whom simply put together parts of movements procured from a variety of makers. Thus the Waltham company has a marked advantage over all other like manufacturers; it produces each and every part of what is designated a perfect watch; it has inspection of every process, every detail, and therefore has ample confidence that the guarantee of faithful performance that accompanies each movement will, excepting in rare and isolated instances, be fulfilled by its time-keeping and other qualities.

The company manufactures its own cases, in which fully as great improvements have been made as in the movements they are intended to enclose. The silver cases are produced at the Waltham factory, the gold cases being made in New York city, over 800 hands being employed in this branch of the industry, while the value of the precious metals annually consumed naturally reaches a very large sum. Among the improvements in this department it is worthy of note that one of the more recent productions is a case

without hinges or springs, which screws together, making the watch secure against dust and moisture, and so arranged that it is unnecessary to open the case for winding or setting the hands.

Messrs. Robbins & Appleton are selling agents of the American Waltham Watch Company, and to this firm is due a considerable portion of the credit for the wide extension of the company's business. The offices of the firm are found in New York, Boston, Chicago, and in London, in Sydney, Australia, and several other foreign cities.



WORKS OF THE BOSTON MANUFACTURING COMPANY.

BOSTON MANUFACTURING COMPANY.

One of the earliest uses of water power in Waltham was made towards the close of the last century, when John Boies began the manufacture of paper in a building erected by him on the bank of Charles River east of the present Moody street. This industry met with indifferent success, until, in 1813, the mill and water power were purchased by Francis C. Lowell and Patrick T. Jackson, who, in connection with Nathan Appleton and other associates, in February of that year, secured from the legislature the incorporation of the Boston Manufacturing Company, with a capital of $400,000, for the purpose of commencing the manufacture of cotton cloth. In the above year the first mill was completed, it being the building nearest the Moody-street bridge, which retained very nearly its original proportions until the fall of 1886, when it was modernized by the erection of a new roof. During the construction of this building Mr. Lowell visited England for the purpose of obtaining improved machinery. It was several months after his return that, by constant labor, he was successful in perfecting the power loom. Under date of February 2, 1816, the books of the company record the accomplishment of the first complete manufacture of cotton into cloth in this country by machinery, the entry reading, "1242 yards 4-4," or 36 inches wide. These goods were an imitation of those imported at the time from India. The disposal of so limited a product as 4,000 yards per week was at first a serious difficulty with the company, as at that time only one store in Boston, kept by a Mrs. Bowers in Cornhill, dealt in cotton cloth, and home manufacture of this article met with little favor. Not until the goods were offered at auction was a ready sale obtained, the cloth bringing by this method of disposal about 30 cents per yard, and as the weight was nearly three yards to the pound, after the first sales the success of the company was assured.

A new mill was erected in 1818, increasing the production to 25,000 yards per week, consisting of three widths, 30 in., 37½ in., and 54 in., the market price being 30, 37½ and 50 cents per yard for the respective widths. In February, 1819, the corporation purchased the property of the Waltham Cotton and Wool Factory Company, for the sum of $200,000, increasing at the same time its own capitalization to $600,000, and a Bleachery was established there. In order to connect the two mills the intervening land on the north side of the river was purchased: River street was laid out, Newton street

widened and large numbers of shade trees planted. There is little doubt had the motive power of the "classic Charles" been equal to that of its sister, the Merrimac, Waltham would have been the largest manufacturing centre in this country, as it was the lack of this force that in 1822 prompted the incorporators of this company to build the mills of the Merrimac Manufacturing Company at Lowell, the larger portion of the skilled labor that first had in charge the making of the "Spindle City" being sent thither from the parent company in Waltham. The books of the company contain many names of men known to fame as the the pioneers of New England's greatest industry. At one time Levi Colburn, whose "mental arithmetic" has caused many a youthful brain to reel, was employed in the mechanical department; and it was in these historic alleys that our honored townsman, General Banks, began life as "the Bobbin Boy" and received the inspiration for a larger field of usefulness.

In older times it was considered a great honor to be permitted to work in the cotton factory; the leading citizens were there employed and several of them resided in the "Long Block," a long line of tenements situated just south of the common on land that the city has recently voted to purchase of the manufacturing company; and many are the names of men, since made famous and holding prominent positions in the country, that appear on its records. Few corporations can take so much pride in their record in connection with the town in which they are located as can the Boston Manufacturing Company, celebrated in this regard fully as much as being the pioneer manufactory of cotton cloth by machinery. Its attitude towards Waltham in its earlier days was honorable in the extreme, and should be remembered by the present residents of the city, at a time when the generation acquainted with the earlier history of the company and its benevolent acts is rapidly passing away and is being succeeded by another interested mainly in the present and future.

At the incorporation of the company, and for a time afterward, the town was poor in purse and population. It was at such an uncomfortable time that the Boston Manufacturing Company came forward and established schools for the benefit of the working people, one of which is still standing at the eastern extremity of the factory yard, while another, south of Music Hall, is now occupied as a residence. Further than this, $500 were appropriated for a library; assistance was rendered in building churches; aid was granted the new Fitchburg railroad; a savings bank was established, in which the wages of the employes were deposited and interest allowed, this bank being, it is said, the nucleus of the present Waltham Savings Bank; and in divers other ways was

an interest manifested in the welfare of the people of the times. Not the least of these was the formation of the Rumford Institute in 1826, the erection of Rumford Building in 1827, and the presentation of its library to that institute, which became incorporated by act of legislature in 1858, General Banks, a member, very appropriately signing the act as governor. Still other instances of this nature might be cited, but enough has been presented to show that at least one corporation has a soul and that it was greatly interested in the welfare and improvement of those within its care.

It would be productive of interesting results to compile from the records of the company an account of the many improvements in cotton machinery that have been made by those in its employ since the first use of the power loom, nearly seventy-five ago. But such an instructive task is beyond the limits of the present article, and therefore it can only be said that such improvements have been many and valuable, while outside of the realm of cotton manufacture a number of general improvements have been made, among them being one of the earliest uses and improvement of the circular saw and the invention of a cylinder stove for burning coal.

The growth of the company has been without cessation. In 1832 the capacity was 12,000 spindles, and improvements were constantly being made in the buildings. New water wheels were added and in 1833 a new canal, the present one, was built, which is capable of using all the water of the river. The failure of water in 1836, by reason of a drought, caused the introduction of steam power for use in emergencies, and ten years later this engine was removed to the Bleachery and a larger one substituted. A new dam of granite was built in 1847 to replace the old wooden one, and five years later a new mill, 200 feet long and 80 feet wide, was built for extra wide sheetings, and at this time about the first wide sheetings were made in this country in this mill, by which the number of spindles was increased to 40,000. Steadily the business of the company increased, and the numerous improvements continued. In 1873 a new mill, 150 x 91 feet, was erected, and in 1879 another, 117 feet in length, was added, and in 1882 it was increased to its present dimensions, the building alluded to being the most easterly one of the group; which is decided by mill owners to be one of the finest structures of the kind in the country. It is of unusual width, which facilitates the amount of manufacture, and was built in the most substantial manner. The general condition of the mills is spoken of by insurance men and other specialists as excellent, and many visitors of this class have been heard to comment favorably upon the

care bestowed in this regard; in every way is the property, the actual value of which is in excess of the capitalization, supplied with all the improvements that modern ingenuity can suggest.

Without attempting to further detail the progress of the company, let it be said that the number of its spindles has increased at the present time to about 60,000. The water power being uncertain, and for four or five months in the year but 30 horse power per day being obtainable, although at high water 450 horse power can be used, steam was several years ago more generally introduced, and to-day two engines, each of 600 indicated horse power, furnish the motive power for the larger part of the mills, the machinery in the buildings nearest Moody street only being driven by water power when it is obtainable through the large turbines. Under the boilers 4,000 tons of coal are annually consumed, and in years having dryest periods even this amount is exceeded.

Appended is a table showing the width and style of goods manufactured, the number of yards, the retail price of each style and the total consumption of cotton during the year just closed:

Cotton delivered at mills for year ending Nov. 1, 1886,	7,000 bales,	3,000,000 lbs.
Yards manufactured during the same period,		8,000,000

Leading Styles of Goods Manufactured and Retail Price Per Yard.

STYLE.	WIDTHS, BROWN.	PRICE, BROWN.	PRICE, BLEACHED.
Boston F.	36 inches.	8	
" G.	40 "	9	
Waltham XX.	36 "	9½ Half Bleached.	
Boston H.	49 "	11	
" P.	46 "	10	
" I.	6–4	15	
" J.	7–4	17	20
" K.	8–4	21	24
" L.	9–4	23	29
" M.	10–4	26	28
" N.	11–4	Same as 10–4 Bleached.	
K. J. Sateen.	28 inches.	8 In Colors.	

During its life the company has manufactured goods to the value of $47,000,000, and has paid to its employes, the present number of whom is 1,900, the sum of over $25,000,000 in wages.

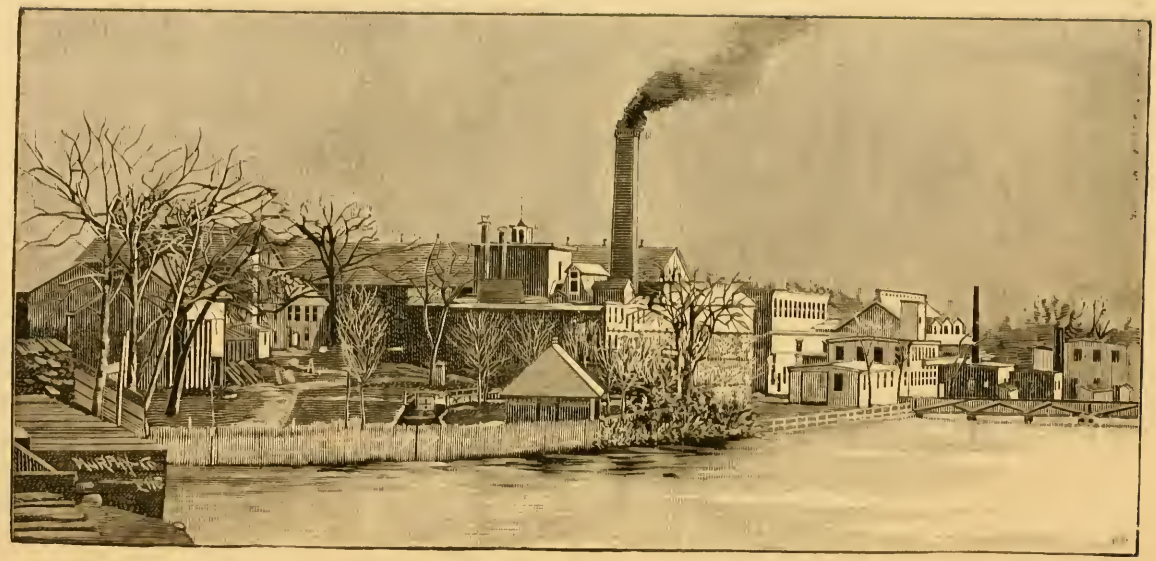
In 1868 the manufacture of hosiery was commenced, largely at the Bleachery, and the product gradually increased until it reached 24,000 dozens per month. The manufacture of hosiery, however, was a few years ago abandoned, it being found unprofitable to compete with the large importations from

Germany, where it was manufactured at low cost. Therefore, the manufacture of gauze, gossamer, balbriggan and summer undershirts and drawers was commenced, and this branch of the business has increased so that at the present time some 150,000 dozens per year are manufactured. Nearly the entire "old mill"—the building nearest Moody street—is devoted to this branch of the business, the reputation gained by the goods, especially during the last two or three years, being such that this branch has become of decided importance. The large rooms in this department are lighted by means of an incandescent electric light plant, and the steadiness of the power obtained from the large engines is such that a beautiful light is obtained. The demand for the various qualities of the underwear manufactured is such that the plant for their production has of necessity been continually increased, while the recent additions and the rearrangement of the departments have given such increased productive capacity that in the near future the product will exceed even the large number of dozens per annum given above.

The success of this company is a lasting monument to the excellent management of its directors and agents. Of the latter there have been but four, Dr. Hobbs, I. R. Scott, M. U. Adams, the latter resigning in 1884 to become treasurer of the Potomska Mills, New Bedford, and being succeeded by Mr. A. M. Goodale, formerly of the Hamilton Woolen Co.

The goods manufactured by the company stand very high in the market, and this is especially true of its wide sheetings, which have a reputation surpassed by none in the state, and which command as high a price as any. Few manufacturing companies can show a brighter record, either in the success which has attended its development and manufactures and their quality, or in the kindly, helping disposition which it has shown towards the town and city in which its mills are located.

The selling agents of the cloth and underwear produced by the company are Messrs. Townsend & Yale, of 345 Broadway, New York, who also have branch houses in Boston, Chicago and Philadelphia. Edmund Dwight, Esq., is the treasurer of this successful company, with office at 50 State street, Boston. He is a gentleman of wide experience in cotton manufacture, and the mills have never been more prosperous than since his acceptance of the office and its responsibilities some fourteen years ago.



WORKS OF WALTHAM BLEACHERY AND DYE WORKS.

WALTHAM BLEACHERY & DYE WORKS.

The Bleachery plant of the Boston Manufacturing Company is situated on the banks of Charles River nearly a mile below the cotton mills, and occupies the site of the Waltham Cotton and Wool Factory Company, a corporation formed in 1810. This latter company transacted quite a large business for the period at which it existed. From a reliable source it is learned that some 200 persons were employed and that the product at times amounted to 10,000 yards of cloth per week. But the company did not meet with financial success and in 1819 the property was purchased by the Boston Manufacturing Company. At the time of this purchase the principal building was a large wooden spinning mill. This was torn down and a bleachery commenced, together with a mill, completed in 1821, for the manufacture of a better grade of cotton cloth. From this modest beginning the operations gradually increased and frequent additions were made to the plant. The most important alterations of recent years occurred in 1873-4, when many of the older buildings—particularly the large wooden drying houses, which changes in the several processes rendered unnecessary,—were demolished and new and more modern structures of brick erected. The manufacture of cloth was relinquished a number of years ago, and more recently the hosiery, later the underwear, department was removed to the upper or cottton mills, thus leaving the entire capacity of the works available for bleachery purposes.

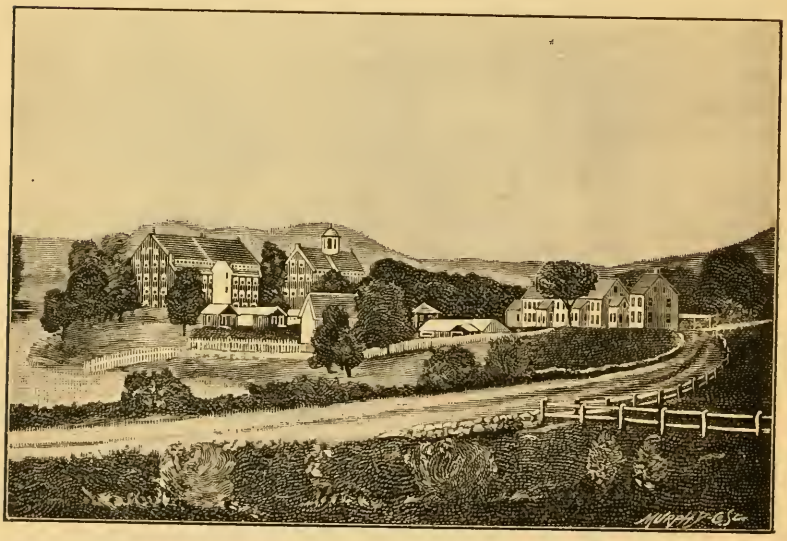
The Waltham Bleachery and Dye Works, although a part of the Boston Manufacturing Company, is in many respects distinct therefrom. Originally equipped to finish, dye and bleach the goods of the cotton mills, at the present time this is but a small portion of the work, which has continually extended until its customers are found from Maine to California and from New Hampshire to Georgia, the record for the year ending May 1, 1886, showing that 17,659 *miles* of cloth were handled, the average being about 100,000 yards each working day, requiring the services of 230 persons in the various departments. In its specialties this Bleachery is not equalled by any other company in the country, and a point is made of sending from the works nothing unworthy of the "Waltham" standard, a fact so well appreciated by the trade that there is always plenty of orders on hand.

Within the past year a new building, 80 by 120 feet on the ground floor and 80 by 40 feet on the two upper stories, has been erected in place of the

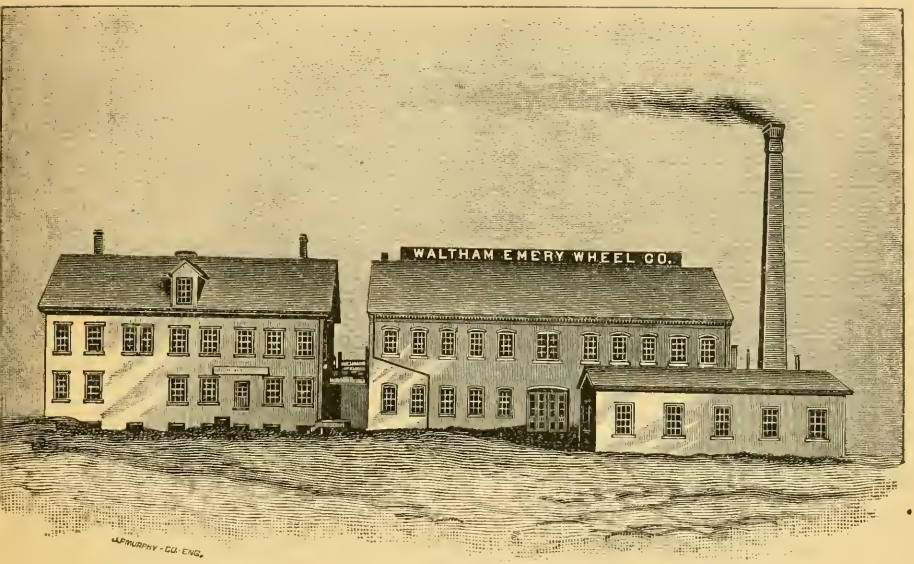
original building completed in 1821, which gave facility for the addition of a new department for tentering and finishing fine goods. There also might be enumerated a great many additions and improvements made in the machinery and in other ways, so that the works, forming one of the largest bleacheries in the United States, are mentioned as representing the highest degree of perfection and efficiency in this class of work.

During the summer time the beauty of the grounds renders them very attractive; there is a well kept lawn shaded by noble trees, and in the beds bordering on the walks are over one hundred varieties of roses, which, with the foliage of the vines trained over the walls of some of the buildings, are so beautiful as to be worthy a visit from a long distance to see.

From 1873 to 1885 Mr. C. H. Mann was agent of the works, but since the latter date they have been in charge of Mr. B. T. Stephenson.



COTTON MILLS IN 1820.



THE WALTHAM EMERY WHEEL CO.

As one stands at the depot of the Fitchburg Railroad in Waltham and looks westward, the attention is attracted by a conspicuous sign bearing the name, "Waltham Emery Wheel Company." A closer inspection reveals the fact that this company is comfortably quartered off Felton Street in a large brick building, to which a large wooden structure of two stories has been recently added in order to accommodate the increasing business and the processes employed in manufacturing emery and corundum wheels.

The origin of this company dates from 1880, at which time Mr. Henry Richardson, a skilled mechanician in the employ of the American Watch Tool Company, began to experiment in the manufacture of emery wheels, the main object being to produce an article especially adapted to the finer classes of work, notably the uses to which emery wheels would be put in watch-making

and its branches. His experiments resulted in the perfection of a process by which emery wheels of the finest quality were made, and the demand for them became so great that he was soon obliged to devote his entire attention to their manufacture. In about a year the business reached such proportions that assistance was needed, and therefore Mr. Henry Shuman became associated with Mr. Richardson. Room was secured in the brick building now occupied and the manufacture pushed with renewed vigor, the business being conducted under the name of the Richardson Emery Wheel Company, later the name being changed to the present title, Waltham Emery Wheel Company. In 1883 the industry still increasing, and further assistance being necessary, Mr. H. P. Hyde became associated with these gentlemen as treasurer and manager of the company. Having had an experience of nearly twenty years in emery wheel manufacture with several of the older companies, in addition to a wide acquaintance with the trade, Mr. Hyde was well qualified for this position, so that the originators of the industry were enabled to devote their attention to the perfection of new methods of manufacture and the production of wheels suited to a wider range of work. Such has been their success that a steady and increasing demand has been created for each new variety of wheel as it has been produced; and instead of the small room in which the operations were commenced, the company now occupies the entire ground floor of the brick building, besides the entire new building, in which are two large kilns and other apparatus, and instead of the personal labors of Messrs. Richardson and Shuman five years ago, the business now requires a force of twenty-five persons in order to supply the demands of customers in every part of the United States.

By way of introduction to a statement of the present business of the company, it may be said that emery and corundum wheels are usually made by one of three processes, each of which has its peculiar advantages and imparts to the wheels various properties: first, by mixing the emery with some elastic cement; second, a chemical process, by forming with various kinds of cement and using a low degree of heat or without the use of heat, and third, mixing the emery with a proper flux and subjecting to intense heat, in which the flux itself becomes a good cutting substance.

It may be added that the methods by which the wheels are made and the materials which enter into the composition of the cements, fluxes, etc., are "trade secrets," various processes being used by different manufacturers, and that the adaptability of the wheels to various grades of work depends very

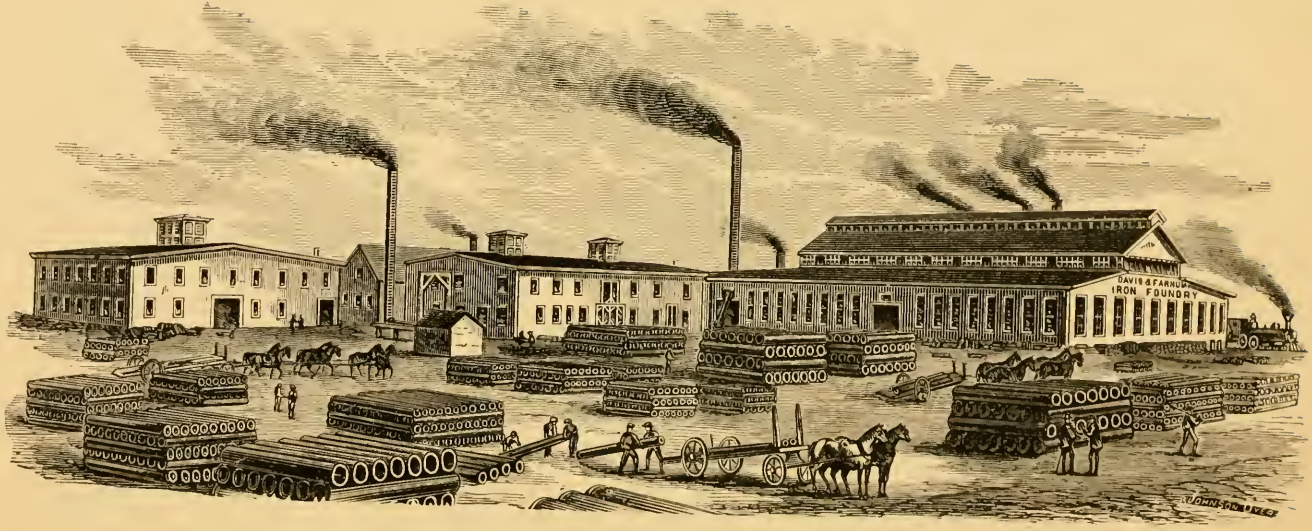
largely upon the success attained in determining the proper proportions of such materials.

The wheels first made by Mr. Richardson were by the first named process and they are known as the "Richardson Wheels." They are very elastic, possess superior cutting qualities, great strength and are unquestionably the best wheels ever produced for fine work and use on automatic machines. As an example of their strength and cutting quality, it may be stated that the writer recently saw one of these wheels, 10 inches in diameter and 1-16 inch thick, revolving at about 1800 revolutions per minute, cut a slot in an ordinary flat file, 1-4 inch thick and of the usual hardness, at the rate of two inches per minute.

There are to-day very few mechanical processes in which emery, in some form, is not used for finishing or polishing,—work ranging from the smoothing of huge castings in the iron foundry, to the finishing, in automatic grinding machines, of a piece of hardened steel to an accuracy of measurement permitting a variation not exceeding one-ten-thousandth of an inch, and including the grinding or sharpening of the cutters and knives of automatic and other machines, "gumming" the teeth of saws, and a great diversity of other uses, for which wheels of special shapes are made. Therefore, from the manufacture of a wheel adapted to a single line of work, the Waltham Emery Wheel Company has enlarged its operations until at the present time all the above processes of manufacture are employed in producing wheels ranging in size from 1-4 of an inch to 26 inches in diameter and from 1-32 of an inch to 4 inches or more in thickness, and adapted to all classes of work.

Not only is there a large variety of sizes manufactured but there is also an equal diversity in the composition of the wheels, for the company recognizes very fully the fact that one composition will not produce wheels adapted to all kinds of duty, and to its success in adapting the composition of the wheels to the work they are designed and expected to perform is attributable and due the larger part of the increase of business and the excellent reputation gained. The company at present has a producing capacity larger than many of the older companies, and the reputation of its goods is unequalled in quality, adaptability and working qualities.

In addition to the manufacture and sale of wheels, the company deals extensively in emery wheel machinery, emery and corundum, and its success in all branches of the business furnishes abundant proof of sound business management.



WORKS OF THE DAVIS & FARNUM MANUFACTURING COMPANY.

DAVIS & FARNUM MANUFACTURING COMPANY.

The extensive works of this company are situated beside the Watertown Branch Railroad a short distance east of the Bleachery station. The business was originally established in 1844 by Mr. R. P. Davis in a building near the Moody-street crossing of the Fitchburg railroad. After a few years it passed into the hands of Mr. F. J. Davis, who in 1860, in order to meet the demands of an increasing business, erected a much larger foundry on Felton street, it being the building now used by Mr. Francis Buttrick for the storage of lumber. In a short time after this latter date, Mr. John R. Farnum became interested in the business and a partnership was formed under the style of Davis & Farnum, which was changed to the Davis & Farnum Manufacturing Company in 1876.

In the meantime the facilities afforded by the plant on Felton street were completely outgrown, owing principally to the excellent reputation established by the firm in certain lines of its manufactures, and therefore to give the necessary increase in productive capacity, the present extensive works were erected and occupied in 1870. They consist of a foundry building, 250 by 125 feet, provided with three cupolas having a combined capacity of melting thirty-five tons of iron per day, running a three-hour heat; a pattern shop and a pattern storage building, each about 100 feet square, a sheet iron shop about 100 by 50 feet, and an office building, besides several tenement houses for the accommodation of the workmen and their families. The works are fully equipped in every way and are capable of producing a large amount of work, upwards of 150 persons being employed in the busiest seasons.

The company does a general foundry busines, its operations including the manufacture of large quantities of water and gas pipe and special castings for water and gas companies, the construction of iron roofs, and any kind of iron castings that may be desired.

Its specialty is the production of complete plants for coal gas works, embracing all the machinery and other apparatus in use by them. Among the gas works erected by the company may be mentioned those at St. Johns, N. B., Decatur, Cairo and Centralia, Ills., Vincennes, Ind., Vineland, N. J., Bath, N. Y., Palatka, Fla., Spencer, Mass., Westerly, R. I., Waltham, Mass., and others. In addition the company has reconstructed and made additions to almost every New England gas company's works, and other similar works in different sections of the country.

Some of the plants mentioned above are quite extensive, and the manner in which they have been constructed and the successful operation of all the varied apparatus have elicited for the company much favorable comment. Therefore the assertion can be safely made that no other company has given better satisfaction in this line than has the Davis & Farnum Manufacturing Company.

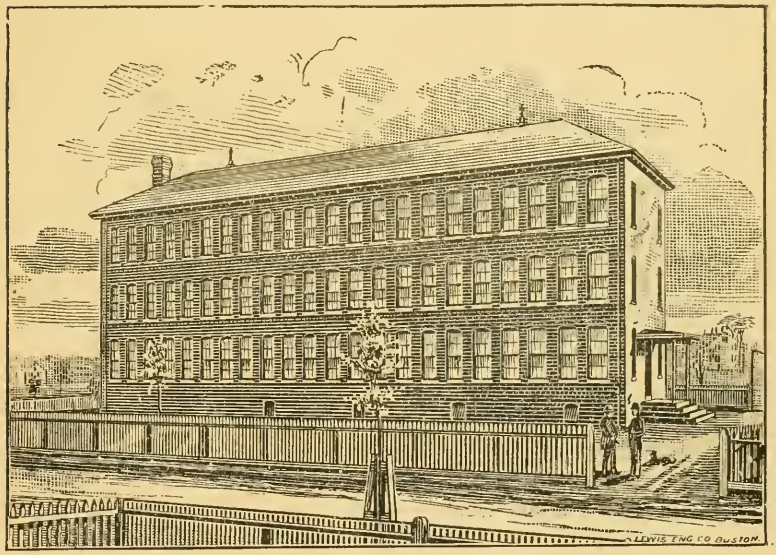
The company has excellent facilities for handling its manufactures. It is connected by side-track with the Fitchburg Railroad, and besides employs from twelve to fifteen horses in transporting manufactured goods and raw materials.

Mr. John R. Farnum, to whose ability the company is indebted for the larger part of its large business, its excellent reputation and substantial financial standing, is the business manager of the firm, whose Boston office is at Room 55, Mason Building, 70 Kilby Street.

UNITED STATES WATCH COMPANY.

In 1883, after a connection of more than twenty years with the American Watch Company, Mr. Charles V. Woerd resigned his position as general superintendent of that company's factory, and purchased the plant of the Waltham Watch Tool Company, a firm engaged in the manufacture of watch tools, etc. Soon after this purchase a new company was incorporated under the same name for the purpose of manufacturing watch tools, implements of precision and time pieces. After a considerable quantity of machinery had been made for various watch companies, the company decided to turn its attention to the principal purpose of its incorporation, the manufacture of watches, and accordingly a tract of land on Charles street was purchased of the town and a factory building, 100 by 25 feet, of three stories, erected thereon, this building being but a single wing of the larger building it is proposed to erect hereafter. As soon as the building was occupied the company continued with increased vigor the making of tools and machinery for its own use. In 1885 the name of the company was changed to the United States Watch Company, Mr. T. B. Eaton being its president and Mr. C. V. Woerd, treasurer and general manager. The preparatory work continued until the fall of 1886, when the construction of watches was commenced, and early in January, 1887, the first

movements were placed on the market. This new watch is somewhat novel in design and competent judges state that it possesses considerable merit. As the company has already received a number of orders for its watches the outlook for the future appears to be excellent, especially as it has for its treasurer and general manager one who is so thoroughly acquainted with the details of of watch manufacture, who is a skilful and thorough mechanician, and through whose inventive genius much of the automatic and other machinery in use in watch factories has been produced.



WORKS OF THE UNITED STATES WATCH COMPANY.

ROBERTS' PAPER MILLS.

In 1796-8 Mr. Nathan Upham erected a small building at Stony Brook near the present South street, in which he manufactured paper. The mill was afterward operated successively by Messrs. Henry Kimball, Sawyer, William G. Parker, and in 1822 was purchased by Mr. Cromwell Gibbs, father of the well known Col. William Gibbs, who worked there when a boy. The product of the mill at this time was wrapping paper, which was manufactured by hand, but in 1828 paper making by machinery was commenced, a Foudrinier machine, built by Jabez Walcott, was introduced, this being the fourth or fifth similar machine to be used in the state. After Mr. Gibbs' death in 1833, the property was purchased by Messrs. John and Stephen Roberts, of Watertown, who continued to manufacture the same grade of paper. The Messrs. Roberts improved the water power greatly and purchased the land necessary to flow Roberts pond or obtained perpetual flowage leases from the neighboring farmers. Several years later Mr. John Roberts (a gentleman deeply interested in local affairs and instrumental in bringing about a number of public improvements, while his integrity of character and other virtues won for him an enviable reputation,) purchased his brother's interest in the property and began the manufacture of sheathing paper. He invented and perfected a process for the manufacture of non-adhesive tarred sheathing paper, and it is believed that these mills produced the first paper of this kind made in the United States. Naturally, under such circumstances, the capacity of the mills was taxed to the utmost to supply the demand for this paper.

The mills have been twice destroyed by fire, but they were immediately rebuilt, the present substantial stone buildings taking the place of the former wooden structures. The water power proving somewhat unreliable, a large Corliss engine was purchased several years ago, and it is now the principal source of power, since the water power was destroyed in 1885, when the City of Cambridge began the construction of its large storage basin. Several of Mr. Roberts' sons assisted him in the business, and in 1869, Mr. William Roberts, then chief engineer in the United States Navy, resigned his position and was taken into partnership under the style of John Roberts & Son, and the business is still continued under the same name by Mr. William Roberts.

Formerly tarred paper was the chief product, but within the past few years paper for building purposes has taken its place. The firm is also one of

the few concerns which have made a success of the manufacture of asbestos paper, which is fire-proof, and used for scenery, steam packing and a variety of other purposes. The mills produce a large quantity of paper each week, and so successful has been their management that they are constantly busy in supplying the demand for their product.

For the reception and shipment of freight there are ample side tracks on the Fitchburg railroad at Roberts station, and a large portion of the product of the mills is transported over the road to Boston, where the goods are shipped to the great business centres of the world.

THE PIONEER AND LARGEST CRAYON MANUFACTORY IN THE WORLD.

Crayons for use in schools and by carpenters, tailors, etc., were first produced in Waltham in 1835, by Dr. F. F. Field, a skilful dentist, who invented a process for their manufacture, this being one of the earliest productions of crayons in the entire world. For several years the industry was of small importance, being conducted as a side issue in connection with his regular practice. Eventually, however, the business passed into the hands of Mr. Zenas Parmenter, and then became a more important industry. For some time the business was conducted by Mr. Parmenter and by Messrs. Parmenter, Powers & Powell, in a small shop on Lexington street, afterwards destroyed by fire. Subsequently the firm became known as Parmenter & Walker, and after the increasing business demanded more room and greater conveniences than were afforded by the building then occupied on Felton street, the "old bedstead factory," situated near the Watertown Branch railroad, was bought and the industry removed thither. A portion of the building only was occupied at first, but the increase of business was so steady and continual that not only was the whole building required, but it was repeatedly enlarged and added to, so that at the present time the large building used for processes of manufacture and storage occupy a floor space many times the capacity of the original structure. From the small beginning the capacity of the works has increased until at the present time 30 to 40 cases of crayons are produced daily, which amount can be doubled should necessity require.

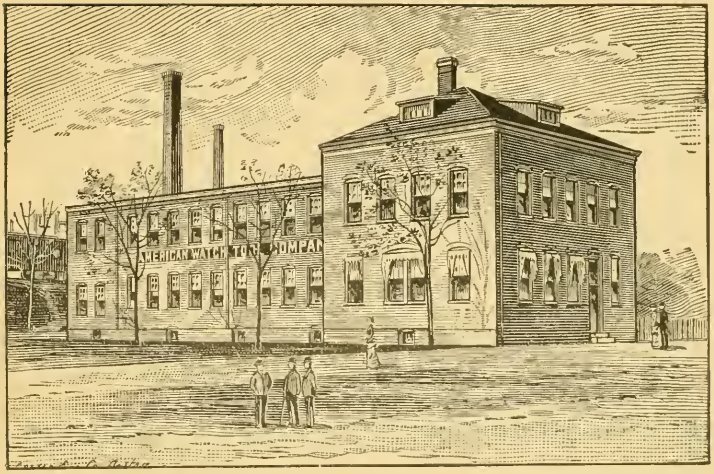
In 1881 Mr. Walker's interest was purchased by Mr. Parmenter, and in

the following year a corporation was formed under the name of the Parmenter Crayon Company, with a paid-in capital of $45,000. Mr. Zenas Parmenter is treasurer and general manager of the company, and to his business sagacity, enterprise and intimate knowledge of the details of the business is due the credit for the world-wide reputation of the "Waltham Crayons," as well as for the excellent financial standing of the company.

The present products of the company are the ordinary white round, the "Waltham" and "Pyramido" dustless in assorted colors, and the "Pyramido" school crayons, together with shoe, carpenters', lecturers' and tailors' chalk.

To the casual observer it may not be apparent that there is much difference between one brand of crayon and another, but let one compare a round crayon such as was commonly manufactured a score or even less number of years ago with a "Waltham" or "Pyramido" crayon, and the superior qualities of the latter will at once be apparent, and it will be evident that the march of improvement has not been wholly outside of this field of industry. In the modern crayon will be noted a freedom from all "grit;" its marking qualities are excellent, and its use is accompanied by the least possible exertion, scarcely any perceptible noise and a remarkable freedom from dust,—features which any person using crayons extensively will quickly appreciate, (especially if they have been accustomed to the use of crayons of inferior quality,) and which are acknowledged as pre-eminent factors in the success of and reputation gained by the Waltham Crayons. Likewise the chalk manufactured by this company for the use of artizans is of excellent quality. Smoothness and uniformity of texture is another feature of this company's goods, and in every way the aim is to make them as near perfection as possible.

Necessarily the demand for goods of this description is a limited one, but nevertheless the Parmenter Crayon Company does a large business, its daily product being largely in excess of the combined out-put of all other manufacturers in the country. Its wares are in extensive use, in addition to home consumption, in all parts of Europe and shipments are made even to the more distant New Zealand and Japan; so that the fame of Waltham Crayons goes hand in hand with that of Waltham watches, and "makes its mark" in many a clime. Thus the progressive management of Mr. Parmenter, who has been identified with the business since its introduction, has succeeded in building up this pioneer industry into the largest crayon manufactory in the world.



AMERICAN WATCH TOOL COMPANY.

An accompanient of the wonderful increase in the production of watches during the last quarter of a century has been the demand for watch-repairers' tools, which should be more accurate, in keeping with the delicate mechanism of the modern watch and capable of producing equally accurate work. This demand has been a continually increasing one, until at the present time the industry has reached large proportions.

In 1861 Mr. Ambrose Webster, then in charge of the American Watch Company's machine shop, prevailed upon the management to manufacture a number of lathes for watch-makers' use, from drawings which he prepared and which are now in his possession. But few of these lathes were manufactured and they are believed to have been the first American Combination Lathes produced. In 1862 Messrs. Kidder and Adams, machinists in the employ of the watch company, feeling that there was an opening for the manufacture of watch repairers' tools, embarked in that enterprise, using Mr. Webster's model for their lathes; but the business did not prove remunerative, and after a number of changes passed into the hands of the Messrs. Stark, by whom it is now continued. Ten years later, in 1872, Messrs. J. E. Whitcomb and G. F.

Ballou, skilled machinists also employed in the watch factory, left that company and engaged in the same business, with the intention of making tools of a high grade. They produced what has become famous as the "Whitcomb lathe," embodying in it the distinctive features which the experience of the watch company had found to produce the best results. In 1874 Mr. Ballou retired and Mr. Whitcomb continued the business under the name of the American Watch Tool Company. In 1876 a new partnership was formed, consisting of Messrs. Whitcomb, Webster, (who resigned his position as assistant superintendent of American Watch Company,) and others. In 1877 a building was erected by the company near the Watertown Branch Railroad, the present location, which has been twice added to, and under the progressive management of Mr. Webster the business was greatly extended. Originally manufacturing but two sizes of lathes with a small number of attachments, three sizes are now produced with a greatly increased variety of attachments, many of which are marvels of ingenuity and which furnish the watch repairer with abundant means for performing the many processes necessary in modern watch repairing, the result being a series of lathes that are used by very nearly *four thousand* watch-makers in the United States and Canada, the number of lathes sold in 1886 being *six hundred and ten.* Besides the three sizes of lathes for watch-repairers, three other sizes are made, for machinists' use and for larger and heavier work.

As an accompaniment to the "Whitcomb Lathe" the "Webster Foot Wheel" has been produced. This wheel embodies many excellent features and has been received with marked favor, as will be noted from the statement that over *eight hundred* have been sold during the past four years.

And while achieving such success in the manufacture of lathes, the American Watch Tool Company has also developed an enviable reputation for the production of watch and clock-making machinery, included in these being automatic pinion cutters, staff-turning lathes, punches and dies, epicycloidal machines, slide spindle lathes, milling machines, etc., among its customers in this branch being included almost every watch factory in America, others in England and Switzerland, besides several clock companies, for whom tools and machinery of the most intricate nature have been constructed. Also, in the manufacture of machinery of delicate construction and requiring mathematical accuracy, has this company gained an excellent reputation, evidence of which is had from the numerous orders for this kind of work. The company has also executed a number of orders in laying out and making of

proper form the teeth of wheels and pinions for watches and clocks, and is the only company in the United States performing such work.

Through Mr. Webster the company has assisted in organizing and equipping more than one watch factory, and as an example it may be cited that the works of the Waterbury Watch Company were designed, built and equipped under this gentleman's personal supervision, besides which a large portion of the equipment of the Cheshire, New Haven and Aurora Watch Companies and the Seth Thomas Watch and Clock Company, in addition to machinery for other similar companies, was furnished by this company.

JOHN STARK & SON.

This firm is one of the oldest establishments of its kind, the senior Mr. Stark having been engaged in the manufacture of watch repairers' lathes, etc., for some twenty-five years. The business was formerly conducted in a building in the rear of Central Block, but for a number of years the firm has occupied a building of its own on Moody street. Here the Messrs. Stark have quite an extensive and well arranged plant, and give employment to from fifteen to twenty persons.

The business consists principally of the manufacture of watchmakers' tools and lathes, together with a variety of attachments for the latter. In this the firm has been very successful, and an excellent reputation has become attached to its goods. Years of experience have prompted the invention of a number of valuable improvements in the lathes and especially in their attachments, so that they are as effectual and convenient as any in the market. While the above goods comprise the principal part of the business, Messrs. Stark & Son also build special machinery to order, and have constructed considerable machinery and tools for various watch and clock companies, their work giving the best of satisfaction; in fact, in all branches of their business they have achieved an excellent reputation, which, together with the actual merit of their productions, has attracted a large number of customers, so that the business is continually in prosperous condition, and this with but slightly feeling the effects of competition.

THE WALTHAM WATCH TOOL COMPANY.

This company, which started October 15, 1886, occupies the premises and carries on the business of the late Hopkins Watch Tool Company. The proprietors are Messrs. Fred D. and Edmund F. Van Norman, sons of Mr. C. Hopkins Van Norman, the originator of the Hopkins Watch Tool Company and also designer of the Hopkins' Lathe, and inventor and patentee of the Hopkins' Foot Wheel with Swing Treadle, Adjustable Chuck, Slide Rest, Universal Head, Swing Tailstock, Uprighting and Jeweling Tool, Watch Case Tool and the Gem Pivoting Chuck, the latter acknowledged to be unequalled, it being operated instantly and the work held perfectly rigid and as accurate as though between dead centers. The present proprietors, who are young, active men and practical mechanics, have had the benefit of a number of years of valuable experience while associated with the former company and are perfectly acquainted with the business in all its branches, which has been proved by the number of improvements introduced since they have been in business. In addition to the large line of goods of the Hopkins Watch Tool Company, the present company has designed and is making a number of new tools of great practical value. The new No. 3X4 Hopkins' Lathe is a modification and combination of lathes Nos. 3 and 4 and is claimed by competent judges to be the handsomest and best proportioned lathe made. The "Waltham" Lathe, also lately introduced, is an entirely new departure and is designed to fill a long-felt want among watch-makers' apprentices and others who do not feel able to pay the price of a high grade lathe. The lathe, which is without tailstock unless otherwise ordered, is of No. 3 Hopkins' standard size, and is carefully and accurately made. It is furnished with a Hopkins Patent Adjustable Chuck, and attachments, and four cement brasses, and is made so that any other chuck except split chucks, can be attached to it. It is neat and attractive in appearance, and with its attachments, will cover as wide range of work as a set of forty split wira and step chucks; and is placed at such a low price as to be within the reach of every apprentice. In addition to these tools, there have been designed and are now being made a new gear cutting and rounding-up tool to be attached to the slide-rest, and a caliper swing jeweling rest, both of excellent design and of great practical value. The Waltham Watch Tool Company has lately improved its facilities for work, so that orders can now be filled promptly, The valuable services of Mr. C. Hopkins Van Norman are still retained by the company.

WALTHAM GAS LIGHT COMPANY.

The Waltham Gas Light Company was incorporated by special act of the legislature in 1853, upon the petition of R. P. Davis, J. H. Priest, Horatio Adams, Ebenezer Hobbs, and others. At the meeting for organization in January, 1854, the first board of officers was chosen, as follows: Directors, Horatio Adams, president, R. P. Davis. I. R. Scott, R. S. Warren and Horatio Moore; clerk and treasurer, Thomas Page. The authorized capital of the company was and is $150,000, although it was decided to issue stock to the amount of but $35,000 for the purpose of introducing a plant for the manufacture of gas; and it is worthy of note that the works, which were constructed by Mr. R. P. Davis, were completed at a cost less than that sum. The plant was put in operation in October, 1854, the first gas being furnished to consumers on the ninth of the same month, the price being the same as that charged by similar companies in other places at that time, $4.00 per 1,000 cubic feet. At this early stage of its existence the works of the company were small, although abundantly able to meet the public demands for the new illuminant, while an excellent choice of location had been made near the river opposite the cotton mills, on very nearly the lowest land in the city.

As would be naturally expected with such an industry as this, the business of the gas company has increased correspondingly with the growth of the city and the development of its industries. To clearly illustrate this increase, and also to show the decrease in price which the company has been enabled to make by reason, principally, of the improvements in gas manufacture, the following interesting table has been prepared, and by which the development of the company may readily be traced:

Year.	Production, cubic ft.	Price, 1,000 ft.		Year.	Production, cubic ft.	Price, 1,000 ft.	No. Meters
1855	3,000,000	4 00	-	1877	—	3 70	406
1860	3,800,000	3 70	-	1878	—	3 30	-
1862	—	3 50	-	1879	—	3 00	-
1865	5,500,000	3 50	-	1880	11,300,000	3 00	426
1866	—	4 00	-	1881	—	2 70	-
1871	—	3 80	-	1883	18,700,000	2 50	530
1873	—	3 60	-	1885	—	2 00	-
1875	9,000,000	4 00	-	1886	24,250,000	2 00	700

Thus it will be seen that from a production of 3,000,000 cubic feet and a

price of $4.00 per 1,000 feet in 1855, the product has steadily increased and the price almost as steadly decreased until the present time, when the production is nearly 25,000,000 cubic feet per year and the price but $2.00 per 1,000 feet, which is about as low as gas is furnished in any of the small cities.

In July, 1858, the paid-in capital was increased to $40,000; in 1868 to $45,000, and again in 1871 to $75,000, the works being enlarged by the purchase of additional land, the erection of large coal sheds and a gas holder. In 1875 the capital was again increased to $100,000, and in August, 1882, was made $130,000. During the latter year the works were substantially rebuilt and the productive capacity greatly augmented. The retort building was enlarged and improved retorts placed therein to the number 31, of which seven are used in summer and twelve in winter; a building for improved purifying apparatus was erected, and in 1884 a gas holder of 100,000 cubic feet capacity was added, which is so constructed that it can be doubled in size when necessary. The plant is conceded to one of the finest in the country, its capacity now being some 200,000 cubic feet per day.

In 1856 Mr. I. R. Scott became president of the company, a position held by him until 1882, when Dr. B. F. D. Adams was elected to the office, the latter being succeed in 1884 by Mr. Lowell Clark, the present incumbent. Mr. Horatio Moore held the office of clerk and treasurer from 1855 to 1878, when he was succeeded by Mr. G. A. Stearns, who still continues in office. Mr. S. E. Locke was the first superintendent of the works. He was succeeded in 1874 by Mr. C. H. Balcom, who in 1877 was followed by the present superintendent, Mr. William Tarbell. Some months ago Mr. A. W. Tarbell was chosen assistant superintendent.

During the summer of 1886 an electric light company was formed among the citizens and steps were taken towards the introduction of such a plant, but as it was thought that the gas company could conduct the business with much better success and benefit to the public, a union of the companies was effected last November. The gas company immediately procured the proper plant, increasing its capital to $140,000 for the purpose, and on December 24 last the electric light illuminated the streets and stores for the first time. The arc light only is now in operation, but an incandescent system will soon be added.

Under the guidance of its efficient treasurer and capable superintendents the company has made great progress in the past few years, and the efforts of these gentlemen to afford the best possible accommodations and to secure for the gas consumers the best results through the use of improved devices, are appreciated.

Through the efforts of these gentlemen many improvements in burners have been introduced to customers, thereby effecting a saving in cost and producing a better light; while gas stoves, for heating and cooking, are also in extensive use. The office of the company is in Welch's Block, Moody street.

The before mentioned industries do not comprise the entire number, and in addition there are the following, all of which are eminently successful in their several lines of business:

Anderson Bros., carriages, sleighs, etc.
Francis Buttrick, lumber yard and planing mill.
Crescent Castor Co., furniture castors.
Eclipse Incubator Co., incubators, brooders, and wood workers.
Ellis Manufacturing Co., hose supporters, etc.
W. H. and G. A. Flagg, the Waltham milk wagon, carriages, sleighs, etc.
G. F. Hobbs, knitting machines and foot wheels.
Alden Jameson, Commonwealth mineral spring, ginger ale.
Libby & Larcom, wood workers.
W. H. Leatherbee & Son, lumber yard.
Andrew R. Logan, hair springs and hair spring wire.
D. D. Palmer, chronometers, watches, etc.
G. B. Pope, grist mill.
E. M. Richardson, blind fastenings.
Thos. Roddick, oil cans, electro-plater.
G. F. Shedd, steam engines and boilers.
F. K. Sibley, emery and crocus cloth.
Thorp & Marsh, Waltham laundry.
U. S. Chemical Company.
A. H. Walker & Co., crayons.
Waltham Iron Foundry Co., iron founders, and special castings.
Warren Hose Supporter Co., hose supporters, etc.
E. D. Wetherbee, watch dials, etc.

There are still other industries, including the manufacture of silk handerchiefs, in colors, by a colony of English workmen, who produce an excellent article and whose business promises to be a very successful one.

Land for Building Purposes.

When the publication of this work was projected it was the intention to devote a considerable number of its pages to a description of the lands in various portions of the city available for building operations of various kinds, but the other features have taken up so much more space than was anticipated that this department must necessarily be curtailed.

Waltham affords one of the best opportunities for investment in real estate, and those who have taken advantage of this fact are now obtaining substantial returns from such investments. The most rapid increase in population has taken place during the last twenty years, and during the latter portion of that period an average of very nearly 125 dwellings has been erected each year, which number has but fairly supplied the demand for tenements,—indeed, there has constantly been and now is a call for accommodations for small families, and a profitable return is vouched to any one undertaking to supply this want.

Very fortunately there is a large amount of available land for building purposes, a large part of which is situated directly in the pathway of the city's future growth. The city itself is owner of a large tract of land which the authorities have just placed in the market. This tract is known as the "poor farm land." It consists of several acres, excellently located, quite near to the churches, schools and stores, on the line of the Fitchburg Railroad, and as a road bridge is to be constructed across the river near the watch factory opposite this land, it must soon be in active demand. It has already been laid out into lots and an appropriation made for the construction of streets.

There is a large amount of land in close proximity to the above, the property of individuals, which is rapidly being occupied, and still fur-

ther to the westward is the extensive "Harrington farm," lying along the Fitchburg Railroad, which must soon be needed by the builder.

No portion of the city seems destined to have more rapid development than the section known as "Roberts," which has been so named in honor of the late John Roberts, former proprietor of Roberts' paper mills and of a large portion of the territory near the railroad station. The location is excellent and the land is admirably adapted for building purposes, a considerable portion of it being elevated and affording excellent views of the surrounding country. As an example the elegant estates of Messrs. Baker and Wheelock, as well as that of Mr. William Roberts, are cited, the first named gentlemen having erected costly dwellings on an elevation commanding an extensive view, and the grounds about them are being improved in such a manner that the estates will be among the finest in this vicinity. The Fitchburg railroad has recently made Roberts the headquarters for the arrival and departure of many of the local trains between Waltham and Boston, and, in order to meet the demand for dwellings, Mr. William Roberts has built a number of attractive houses, and also a building near the depot designed for use as a store, in which the city has established a school. Still further building operations are contemplated by Mr. Roberts, and it is safe to say that houses will be erected as rapidly as a call is made for them.

The Central Massachusetts Railroad passes through a part of the city which is still comparatively undeveloped, and along its entire line across the city there is an abundance of locations suitable for manufactories, for business purposes or for residences. It is rather remarkable, in view of the many excellent locations, combined with first class railroad facilities, that no manufacturer has been induced to secure the advantages here offered. While there are eligible locations on all parts of this road, were any portion selected for especial notice, it might be the elevated ground lying at the foot of Mt. Prospect, which is among the most desirable in the city. It is elevated and sightly, and already have several dwellings been erected there. The land about the Central railroad is considered to be so desirable and valuable in connection with the future development of the city, that the matter of forming a

syndicate for the purpose of developing some of the territory is now be-considered, which appears to be an excellent scheme and one likely to prove beneficial and profitable.

In the central portion of the city also are found several parcels of land in excellent neighborhoods, and which are rapidly being built upon by a good class of people.

In the easterly section there is abundant room for growth and building operations, this being true of the entire territory. The time should not be far distant when other industries are located along the Watertown Branch railroad, for there is no feature lacking which is desirable in such connection. The Bleachery village is a very pleasant part of the city, and its undeveloped portions are well worthy the attention of those contemplating an investment in real estate or who are in search of a location for a manufactory.

The South Side is the most thickly populated part of Waltham, and if the number of the dwellings continues to increase rapidly in the future house lots will be at a decided premium. In the immediate vicinity of the watch factory the many acres formerly owned by the watch company are now nearly all built upon, and a comparatively small part remains unoccupied. The site of the Newton Chymical Company's former works has also been appropriated by the house-builder, although the agent of this company has several vacant acres near the Newton line, through which streets are being laid out, an indication that the land will not long remain idle. In the vicinity of High street at its easterly part are locations for many future houses, which are among the finest of all, and near the southerly part of Moody street are other sites upon which those who desire to become residents of Waltham may erect homes.

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